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• Sea Power: A New Rival

# NAVAL WAR COLLEGE REVIEW

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# FOREWORD

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# CHALLENGE!

A new reality is symbolized by the photograph on the front of this issue. Having rested secure and unchallenged for a generation, the U.S. Navy is now faced with a worthy rival, competent on the sea and effective in its mission, growing in capability and ambition. It is the purpose of this special issue of the *Naval War College Review* to analyze the nature of this rivalry in as many of its aspects as possible: to trace the history of Soviet maritime power to its present magnitude; to comprehend the motivation which may be propelling its development; and to project, if possible, the latent and overt implications which it holds for the United States and the free world in general.

The task outlined is one of daunting proportions, but it is believed to be a necessary one. The enormous effort put forth by one of the two greatest world powers, an effort so immediately affecting the interests of all nations, deserves the closest attention, especially on the part of those who make the sea their career. The Soviet maritime expansion has been truly phenomenal. From the battered disarray of 1945 has arisen a large, versatile, modern navy and a dramatically expanded and versatile merchant marine. Both can and do traverse the world's oceans with freedom and confidence.

No nation which has championed freedom of the seas as has the United States could deny the right of the U.S.S.R. to exercise this new flexibility. Nor are the concepts put forward between these covers directed simply toward the implications of military confrontation in hot war. It is intended here rather to deal more with the ramifications of this new rivalry in the context of nonbelligerent, cold war competition. Each increment of Soviet maritime power provides the Kremlin with an expanded range of options, all of which affect those open to the United States--usually adversely. One has only to consider the difference between our position in the Mediterranean today and that of a few years ago to feel the force of this relationship.

The Soviet seapower potential, recent though it may be, is far from superficial: it represents a concerted thrust of an entire economy. Drawing on all available sources, from U.S. lend-lease to native initiative, the U.S.S.R. has constructed over the last two decades a technological foundation which is at once broad and profound. Training and educational facilities in marine engineering, naval architecture and other sciences have drawn level with or exceed our own, as has the caliber of personnel whom they graduate. Physical installations such as shipyards are as sophisticated as they are numerous. It is with these tools that Soviet maritime strength is being fashioned--not only in

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their navy, but in their merchant marine, in their ubiquitous high seas fishing fleet, in their oceanographic research and investigation of the resources of the deep sea. The new challenger confronts the United States with an aggregate of all these factors, fused together by a unified central authority and deployed individually or in concert as a corporate vehicle of national policy.

Projections of future Soviet maritime production can be based upon what the U.S.S.R. itself has publicly established as its objectives, but these goals and their means of implementation can change rapidly. Any hazarded estimates as to intentions, particularly regarding broad Russian policy, must perforce assume the tenuous nature of conjecture. But if the future is murky, the indications of the present and immediate past are manifestly clear. We are witnessing today the burgeoning of a Russian ambition which has been germinating for generations. It has been the frustrating legacy of that body of land and that people to be denied the physical characteristics, the geography conducive to maritime growth. Confined on the west by Europe, on the north by ice, and on the south by the subcontinent--and open on the east to competition with that epitome of maritime nations, Japan--historically the prospects for Russian maritime strength have been geographically discouraging. Most discouraging has been the lack of warm water ports.

By initiative and application these obstacles have been overcome, but not removed. The U.S.S.R. has been acutely aware of both the potential advantages of its newly acquired seapower, and the necessity to use it to exploit and consolidate its position on a global scale. Domestically, considerable economic benefits are to be reaped from expanded commercial horizons. Vis-a-vis the Western allies, the Soviet Union need no longer draw its lines of national defense along its territorial borders; nor are offensive opportunities limited to those based on land. And with regard to the third world, whole new vistas spread out for the efficient, familiar combination of economic aid, political manipulation, and military leverage orchestrated from Moscow. Having established herself as a Mediterranean power, Russia is now engaged in broadening her horizons. Soviet squadrons have launched visits of goodwill throughout the Indian Ocean basin, where the traditional British presence is about to disappear.

Whether the ever present aggressiveness which has lately distinguished Soviet shiphandling will emerge in Soviet foreign policy toward the Indian Ocean and elsewhere, remains to be seen. It is obvious, however, that the Soviets have recognized the utility of seapower in international politics, and that they have been eager to exercise it. The significance of this situation is the more urgent in the light of U.S. efforts in the same sphere. The modern, innovative Soviet Navy and blossoming merchant marine have entered the arena with a huge but partly obsolescent U.S. line of battle and a commercial fleet which, in the main, must be characterized as decrepit. Where the Soviet maritime policy has been unified and assertive, the comparable U.S. approach has been divided and uncertain.

In view of these considerations, and their importance, at the very least a study of the situation in depth seems appropriate. The endeavor here has not been to pass judgment on U.S. or Soviet commitments or foreign policy, nor to give normative proposals of what future

action should be. Ultimately, that is the province of our civilian leadership. Rather, an attempt has been made to weigh the concrete evidence of past and present: to define the capabilities of the U.S.S.R. in the light of its new maritime power and to analyze the alternatives available, if they wish to pursue them. It is hoped that such an assessment, thoroughly and intelligently compiled, will be of service to the makers of U.S. policy.

R. G. COLBERT
Vice Admiral, U.S. Navy
*President*, Naval War College

**Cover: A view of the Soviet carrier *Moskva* as seen by the crew of a U.S. Navy patrol plane in the eastern Mediterranean.**

# THE RUSSIAN MARITIME THREAT

## An Approach to the Problem

by

Rear Admiral H.E. Eccles, U.S. Navy (Ret.)

Under sponsorship of

The George Washington University

Logistics Research Project

*In this first of 10 articles, in this issue dealing with the maritime problem, the author seeks to fix the maritime element of national power into a valid and comprehensible politico-strategic framework. The commitment of limited resources to maritime programs can only be made after a realistic appraisal of need. Even then, individual programs will be subjected to the stress and strain of the U.S. democratic political process.*

**Introduction.** The Soviet Union is now actively exerting strong worldwide political pressure by means of economic and military aid backed and screened by a strong, modern, and highly visible naval force. Whereas a few years ago the Soviet Navy was predominantly defensive and generally confined to northern oceans and coastal waters, it now operates freely and extensively in the Mediterranean, the Indian, and the South Atlantic Oceans.

Its electronic reconnaissance and aggressive fishing exploitation, which have been obvious for years, have been extended as far as Australia. Its fast growing merchant marine is more and more a major world economic factor.

This all adds up to the skilled aggressive use of maritime power for economic political ends and constitutes a major threat to the position of the United States and its allies.

No study of this Russian maritime threat can ignore the interaction of policy, strategy, and military capability. In other words, strategy is subordinate to policy but limited by capability. But the limits on strategy imposed by capability must, in turn, be reflected in policy.

This reaction induces the two further related considerations of time necessary to convert a potential capability into actual power and the relations and distinction between short-range and long-range policy and plans.

Moving from this important but abstract level into the area of specific military-economic plans and programs requires thorough sophisticated systems analysis with special consideration for side effects and marginal utility.

But here we need further inputs--relative values of objectives sought, military values, and logistic planning factors. Much research is needed in all these areas.

Any results achieved without rigorous attack on these matters are trivial--interesting speculation at best--but perhaps dangerous since they may deceive people into thinking that they know what they are doing when in reality they do not.

The rise of Russian maritime power in the last decade can be fully appreciated only if it is examined in a disciplined framework which involves an interweaving of fact and theory.

* * *

The problem it presents is a clear illustration of a "difficulty" as described by T.D. Weldon.[1] He points out that there are two basic types of problems--one, the "puzzle" and the other, the "difficulty." A puzzle is a problem to which there is a specific correct solution. A difficulty, in contrast, cannot be solved in specific final terms; it can only be surmounted, reduced, or at times ignored.

Our major political-military problems are "difficulties"; some of their aspects, however, may be "puzzles," and their solution can help in dealing with the overall difficulty. A useful approach to the problem of Soviet maritime development requires an awareness of this distinction.

This issue of the *Review* discusses some of the interrelated elements of this "difficulty" and places them in the context of history primarily to establish a sound perspective and a foundation for subsequent further development. As this elaboration and development takes place, we can expect individuals and special study groups to reach conclusions which will be useful both for public enlightenment and Congressional and Executive action.

Obviously, the college will be particularly interested in the military, and especially the naval, aspects of the question, but always with the appreciation that military proposals are dependent upon political aims and that the resources they call for will always be limited by economic considerations.

Three fundamentals, each with important corollaries and subordinate factors, dominate the analysis of the implications of Russian maritime development.

First: This development of maritime power shows that the Russians have a firm grasp of the fundamentals of strategy and are determined to apply them in the pursuit of national interests.

Second: The United States of America has shown conclusively, not only that it has enormous economic potential, but also that when its people attain a clear sense of purpose and act with a high degree of national and conceptual unity, this economic power can be rapidly converted to comparable military power.

Third: There are, however, differences of opinion in the United States and among its allies as to:

A. The implications of the increase in Russian power.

B. The policies we should adopt to counter the threat.

C. The specific measures and the allocation of resources to support these policies.

Thus, the development of conceptual unity then becomes essential to deal with the problems posed.

**Russian Maritime Power.** With this brief background, let us pass on to the hard practical facts of Russian maritime power.

Of the many articles on this published during the last year, none is more comprehensive than "The Changing Strategic Naval Balance U.S.S.R. vs. U.S.A." This report, issued in December 1968, was prepared at the request of the Chairman of the House of Representatives Armed Services Committee by a group of distinguished senior retired officers and military scholars under the chairmanship of Adm. Harry D. Felt, USN, (Ret.), using unclassified material published prior to October 1968.

Subsequent information indicates that the report understated rather than overstated the situation.

Largely as a consequence of this study, on the opening day of Congress, 3 January 1969, Committee Chairman Rivers introduced a bill authorizing $3.8 billion in 1970 for naval shipbuilding.

The evidence of rapidly growing power is clear. The Russians now have a large, balanced modern navy and they are using it to good effect. A few illustrations suffice to show how they now stand.

The five *Kresta* class cruisers mount a complex of weapons systems including surface-to-surface missiles with a range of 450 miles, surface-to-air missiles, and conventional guns.

The *Kynda* class destroyers have both surface-to-surface and surface-to-air missiles. The Russians apparently think that the combinations of these types can challenge U.S. carrier task groups in all oceans.

The 150 *Osa* and *Komar* short-range, guided-missile patrol boats displacing 200 tons carry the *Styx* missiles that sank the Israeli destroyer *Elath*. These can constitute a dangerous threat to coastal operations of major forces.

The new *Moskva* helicopter carriers can handle about 30 helicopters and mount surface-to-air missiles. These combine with a large variety of landing craft and the newly expanded naval infantry to provide excellent amphibious capability.

This surface force is supplemented by escort vessels, coastal minesweepers, minelayers, icebreakers, oceanographic vessels, and electronic intelligence ships.

The weapons systems of the modern Soviet Navy are accurate and flexible and are mounted on well-designed ships which can keep the sea.

The Soviet submarine force constitutes a major element of power consisting of about 250 attack submarines and 100 missile submarines. The former constitute a grave threat to our vital oceanic lines of communication. The missile submarines, because they carry both long-range underwater-launched nuclear missiles and shorter range surface-to-surface missiles with terminal guidance, are a threat both to the cities of the United States and to the carrier task forces at sea.

This balanced, versatile modern force is supported by a well designed and balanced mobile logistic force capable of underway replenishment and mobile base support. It includes all types of service craft, oceangoing tugs, and, most importantly, six modern ships for missile supply and maintenance of nuclear-powered submarines.

It is important to realize that *the combat ships and major logistic ships were designed and built by Russian shipyards.* Furthermore, most of these ships are under 20 years of age, whereas most of the U.S. naval ships are over 20 years old.

Since naval ships form only one element of maritime power, a brief comparison of the U.S.S.R. and the U.S. merchant fleets is instructive.

Of the approximately 1,400 Soviet ships of 10.4 million tons, about 80

percent are less than 10 years old.

In contrast, of about 1,100 U.S. ships of 14.8 million tons, about 80 percent are 25 years or more in age. In 1968 the Soviets had 456 vessels on order while the United States had only 51.

In 1966 the Soviet Minister of Merchant Marine wrote:

> The fleet has been joined by hundreds of new and improved vessels of various types... the creation of a Soviet Merchant Marine has made it possible to free the nation from dependence on foreign vessels for maritime shipping. Today the Soviet Union can deliver cargo to any point on earth using high-speed Soviet ships.[2]

This large merchant marine is made even more effective as an arm of strategy and policy by being under disciplined authoritarian control. Furthermore, since Russia is not an "affluent society" there seems to be no great problem in manning the merchant and fishing fleets.

In sharp contrast, the U.S. merchant marine is in a deplorable condition in almost every respect. The situation is dominated by the seemingly all-powerful labor unions whose whipsaw tactics of the last 40 years destroyed our coastal shipping and forced the development of the large fleet of "flags of convenience." American-owned but foreign-manned ships cannot be relied upon to operate effectively in emergencies.

The American shipowners who operate in a fiercely competitive climate under a variety of complex and inconsistent regulations and subsidies are at odds among themselves. In spite of good accommodations, very high wages, short hours, fringe benefits, and early high-pensioned retirement, it is very difficult to recruit seamen for the U.S. merchant marine.

The economic competition with our maritime allies, which produces difficult problems of differential rates and allocation of routes and access to coastal ports, further complicates the situation. Finally, the officials of the Executive Branch of Government, the members of Congress, and economists are sharply divided as to how best to handle the question of the merchant marine.

The contrast in fishing fleets is equally striking. There again, the Russians have built a very large, modern fleet while the United States has depended on frequently inadequately financed private ownership. Here again, the fishermen are aging while our young men prefer life ashore. Here again, the Russians have a great reconnaissance capability, while our fishing craft have no such organization or, indeed, capability.

The technical-industrial-economic base of Russian maritime power is sound and very large. The Russians have shown that they can design, build, man, and operate a large, modern, comprehensive maritime force. They supplement this by purchasing many merchant and fishing ships abroad. Most importantly, their system of economic control allows them to allocate resources toward maritime expansion without the constraints of short-time commercial profit.

A further implication is especially significant: it has been estimated that the Russians can build 20 to 30 nuclear submarines a year in covered shipyards protected from satellite reconnaissance. This constrasts with the current U.S. capability of building 10 to 12 a year in shipyards open to public view. Senator Pastore's comment is pertinent. "It is now clear... that the Department of Defense has grossly underestimated the rate at which the Soviets are improving their nuclear submarines."[3]

The large and growing Russian merchant and fishing fleets and their capabilities both for reconnaissance and missile launching, plus the increased high-seas cruising of the Russian surface and submarine fleets, significantly decrease the value of the system of stra-

tegic warning that the United States has previously counted on.

Finally, in recent years Russia not only has become a major seapower, but has used this newly acquired power to support an expansionist foreign policy by various means such as:

A visible presence in the eastern Mediterranean accompanied by continued surveillance and overt harassment of the U.S. 6th Fleet.

Deployment of a naval task force from Vladivostok to the Indian Ocean and a visit to the Persian Gulf.

Maintenance of a submarine group in the Central and South Atlantic Ocean.

All of this supports military assistance and economic aid to Syria, the United Arab Republic, and Algeria and its general aid policy in India and in Africa.

The facts of the development and recent use of Russian maritime power illustrate certain important elements of military theory, to wit: conceptual unity, the understanding of strategy as the art of comprehensive direction of all forms of power toward the attainment of political-economic objectives, and the use of military power as the shield for the advancement of other forms of power.

First, let us discuss conceptual unity before going on to the basic theory of strategy.

**Conceptual Unity.** As was previously stated, the most important task when confronted with a problem on the scale of Soviet maritime expansion is to establish a conceptual unity for tackling the difficulty.

This has its special philosophic irony, for the Soviet system of collective leadership is based on the theory that all the elements of conceptual differences in the party and government leadership be thrashed out in private; that objectives and operational plans be specifically based on the concepts so developed; and thereafter the entire apparatus of government and propaganda proceed harmoniously toward the attainment of the objectives set.

While there seem to be some obvious flaws in the practical working out of this system, particularly in the relations with other Communist nations, the Soviet maritime growth is a brilliant illustration of its success.

The degree to which this Soviet ideal can be maintained, as the forces of change work within the Russian people, is perhaps the single most important uncertainty in forecasting Soviet attitudes and development. Nevertheless, recent events show that in situations of major national interest, the Russian leadership can effectively exercise this discipline

In contrast to the U.S.S.R., in the United States the basic concepts as to national interests and objectives are seldom specifically clarified. Instead, public debate finally brings about an uncertain agreement as to specific policies and measures. But even when these measures are formally adopted, they are not always loyally supported. Instead, there is continuing and frequently inconsistent legal wrangling. The same holds true to an even greater degree within an alliance.

In the specific case of the merchant marine, we are faced with the prospect of a permanently ineffective system because it cannot be left to unregulated private enterprise, nor can it be effectively operated by the Government. There is no conceptual unity among the vested interests involved.

The authoritarian system can treat the merchant marine: (1) as part of a coherent overall transportation system; (2) with the navy, the fishing fleet, and oceanographic research, as a coherent maritime system; (3) as an arm of government economic-political-military policy.

It seems clear, therefore, that the United States national and alliance strategy must be so designed as to stand up

to Russian strategy in spite of having a weak, incomplete, and ineffective maritime system. If by good fortune we can develop unity of concept and build an effective reliable system, so much the better. But it would be very unwise to assume that this can be done within the next 20 years.

**Strategy.** Russian power is developed from a combination of nationalism, natural and human resources, and ideology. It is organized and guided by a comprehensive political-economic-military theory which produces a coherent overall national strategy. Unguided by this theory and this strategy, the power potential, nationalism, and ideology are no threat to the United States; but so guided, they now constitute a clear and growing threat.

To meet the threat, we must have an equal understanding of strategy, power, and force and how they must be interwoven to accomplish national objectives in a world of continued conflict.

In his book, *Strategy*, Liddel Hart developed a theory of strategy as follows:

> We can now arrive at a shorter definition of strategy as--'the art of distributing and applying military means fulfill the ends of policy.' For strategy is concerned not merely with the movement of forces--as its role is often defined--but with the effect. When the application of the military instrument merges into actual fighting, the disposition for and control of such direct action are 'tactics.' The two categories, although convenient for discussion can never be truly divided into separate compartments because each not only influences but merges into the other.
>
> As tactics is an application of strategy on a lower plane, so strategy is an application on a lower plane of 'grand strategy.' While practically synonymous with the policy which guides the conduct of war, as distinct from the more fundamental policy which should govern its object, the term 'grand strategy' serves to bring out the sense of policy in execution. For the role of grand strategy--higher strategy--is to coordinate and direct all the resources of a nation, or band of nations, toward the political objective of the war--the goal defined by fundamental policy.[4]

The element of policy stressed was clearly brought out in the Naval War College publication, *Sound Military Decision*, which said:

> Understanding between the civil representatives of the State and the leaders of the armed forces is manifestly essential to the coordination of national policy with the power to enforce it. While military strategy may determine whether the aims of policy are possible of attainment, policy may, beforehand, determine largely the success or failure of military strategy. Therefore, it behooves policy to ensure not only that military strategy pursue appropriate aims, but that the work of strategy be alloted adequate power, and be undertaken under the most favorable conditions.[5]

These thoughts, together with the Rosinski concept of strategy's being the art of control, provide the foundation for the conceptual unity and coherence required by the situation under consideration here:

> *It is this element of control which is the essence of strategy: Control being the element which differentiates true strategic action from a haphazard series of improvisations. . . .* strategy must be selective in order to achieve economy of force. Comprehensive control of a field of action means a concentration upon those minimum key lines of action or key positions from which the entire field can be positively controlled. This is well illustrated by the concept of control or command of a sea area.[6]

The concentration of thought on control naturally leads to a reexamination and better understanding of the objectives whose attainment is the purpose of the attempt to exercise control. The concept of continuing control prepares the mind for shifting the emphasis from weapon to weapon or from tool to tool in accordance with changing situations or with the changing capabilities

or application of the weapon or weapons systems involved. Thus, the intellectual concept of strategy as "comprehensive control" naturally leads to the intellectual concept of flexibility. But "flexibility" itself must be understood lest it degenerate into mere hesitancy, uncertainty, and vacillation. The essence of true flexibility lies in the continuing clear appreciation of the aim, the purposes, the objective.

Karl Deutsch, in *The Nerves of Government*, touches on an important application of the concept of flexibility with respect to an objective. Drawing on a study of Russian chess strategy, he notes the emphasis given to the value of leading an opponent "to commit his pieces to a particular position," and hence "to commit his mind to . . . a particular kind of strategy." Having done this, the player then makes a "radical switch" in his own play and "confronts the opponent with a new set of problems" for which neither his position nor his strategy is prepared.

Deutsch carries this strategic concept over into the conduct of international and conflict relations, noting the positive advantages to be gained by encouraging an opponent to make an early commitment of his resources with the intention of "turning this commitment later to the opponent's disadvantage." The flexibility to switch one's own strategy at a critical point confronts the already committed opponent with an enormous burden of decision under pressure of time and with the distribution of his resources "impaired or disrupted."[7]

It needs only be added, for the argument of this study, that this aspect of strategic thinking implies a clear grasp of the twin elements of flexibility of mind and action and control of resources.

Strategy is always concerned with objectives. But merely to state the objective is not enough. The objective must be analyzed, not only to clarify the purpose for which action is to be taken, but also to show what constitutes its satisfactory attainment. Here we encounter one of the chief problems of strategic thinking: how is the objective influenced by the course of events? How does one distinguish steadfast adherence to a firm purpose from dogmatic pursuit of an outworn or irrelevant objective? Since both political objectives and political control are essential in strategy, we must consider the situation in two aspects.

First: What situation and areas must be controlled by our use of power in order to attain our objectives?

Second: By what means will the actual use of this power itself be controlled by the political arm of Government?

The first aspect is, in fact, the strategic concept, the plan of action. The second is also essential, for the uncontrolled use of power can easily be both self-defeating and disastrous. This means strict political control of all military action exercised through the elaborate worldwide command control system made possible by modern electronic technology.

In other words, strategy to be effective requires that the potential violence of concrete, tangible military force be related to the intangible elements of national interests and national values. Yet, how do we define or describe national interests and national values in terms which provide a firm base for a sound strategy?

Obviously, this is a highly intuitive process which means that it is an individual matter in which opinions differ strongly. Here we find the major sources of those elements of paradox, contradiction, and equivocation which today are so apparent and so disturbing. This brings us to an examination of power and force.

**Power and Force.** Power is the ability to do, to act, or to influence. It is

The analysis of the political interests and the evaluation of the available national power in the light of the world situation provides the foundation for the harmonious development of policies and objectives--political, military, and economic.

*The National Interest* = The general and continuing ends for which a state acts.

*The National Interests* = The particular interpretation of the National Interest for particular conditions or situations.

*Principles* = The enduring modes of behavior or relatively established guides to action that characterize nations.

*Objectives* = Derived from both Interests and Principles and are a specification of previous generalizations for particular circumstances.

*Policies* = Specific courses of action designed to achieve objectives.

The distinction between policies and objectives is that between means and ends.

For a detailed discussion of these matters see Appendix A of the Brookings Institution study "United States Foreign Policy 1945-1955."

composed of varying elements of physical or psychological force. Raymond Aron has categorized national power as: (1) geographic or spatial *environment;* (2) *resources* human and material; and (3) *the capacity for collective action.*

Military power is vital, but not the only, component of national power. Military forces are of no value unless they can be tactically employed.

Today, clear definitions of "victory" do not seem possible. Instead, the officer in tactical command of an operation must accept tactical restraint and at time tactical defeat for a higher strategic or political purpose. Nevertheless, even while operating under such restraint, as a commander he has the task of maintaining the morale, the discipline, and the combat effectiveness of his forces unimpaired.

The concepts of the use of military power require careful analysis. Not only is it a means of directly accomplishing a specific political purpose by overt force, it also may be used as a temporary shield which allows political purposes to be accomplished by other means. In either case, the only reason to use military power is to accomplish a political purpose. Therefore, the first and primary duty of high military command is to understand the political purpose for which military force is being exercised.

Statistical comparisons of weapons and forces is at best only the first step in making an appraisal of military power. The modifying factors are numerous and important. They can change rapidly. Among them are such factors as basic quality, operational readiness and availability, suitability for use, time and space factors, logistic support systems, flexibility, and mobility. These are all interlocked and interdependent.

The understanding of power and force and their effective use is critical to the understanding of strategy. Again, we come to the basic problem of capabilities and limitations and through these to the problems of public, as well as military, discipline and morale.

**Basic Assumptions and the Process of Change.** With the foregoing fundamen-

tals in mind, we should realize that strategic realism requires the challenge of assumptions, the analysis of interests and objectives, and the appraisal of expectations. This apparently trite statement should have special meaning for the political leaders of the Western World.

The problem is too comprehensive for a conventional military "estimate of the situation" since it includes interlocking political-economic-sociological-military factors. In the the military estimate, states of assumptions and objectives can and should be made explicit. But in this "difficulty," while some assumptions can be made explicit, others will remain implicit and conditional and thus are hard to handle. For instance, while assumptions as to the use and usefulness of nuclear weapons can be stated explicitly and alternate plans prepared for each major assumption, assumptions as to the development and effectiveness of the U.S. merchant marine and naval forces are difficult to spell out explicitly. The political-economic ramifications are so complex, and the lead time for significant improvement is so great, that the preparation of alternate plans is not practicable.

Thus, it is clear that the way in which one views trends in modern human conflict will profoundly influence the determination of the specific measures to respond to the growth of Russian maritime power.

For example, one could assume that the nuclear balance of terror guarantees that Russia and the United States will not engage in direct conflict.

Similarly, one might assume that in the next two decades the United Nations will attain the conceptual unity and the legal and military power to enforce world peace and that the great power will operate with greatly reduced sovereignty under conditions of general and complete disarmament.

Or, again, one might well assume that the conflict, turmoil, and struggles for national advantage will continue for the next few decades approximately as they now are.

In the first two cases, one would then perceive the contest as wholly political and economic with a very minor and essentially secondary military element.

In the third case, one sees the unfolding situation as one in which the contest for political and economic ends is one in which a vital military component may well be decisive.

**Summary and Conclusion.** In summary, the Russian maritime threat can be seen as having four major components:

1. The Marxist-Leninist ideology which provides specific, well-defined political sociological goals about which there is a high degree of conceptual unity in spite of struggles for personal power and disagreements as to methods.

2. The understanding of strategy and of the equivocal use of force as a means of attaining political and social-economic objectives.

3. The driving force of Russian nationalism based on a huge homeland with great natural resources and a hardy, competent people. This provides well-defined national interests.

4. The industrial, technological base which is the by-product of that homeland; the intelligence and courage of its people; the willingness and ability to adopt the production of other national societies.

We in the United States and in the Western lands cannot hope to counter this expansionist Russian maritime threat simply by military means. Our military power can never be more than a screen which permits the component elements of a free civilization to generate and maintain the political economic stability and the social welfare of our peoples. This fact points up the skill with which the Russians have made a practical application of the Marxist-

Leninist theory of force together with the maintenance of an equivocal threat.

The equivocal nature of this threat upsets the decision process of our governments and of their peoples at a time when the internal conflict of our society is demanding the application of resources in a way as to make it more difficult to allocate resources to the protection of the society in which this conflict is taking place.

For example, a strong military posture in the NATO alliance is of little value if the values of Western civilization are destroyed by sociological economic disintegration within the American nation.

Conversely, however, if the spread of education in Russia stimulates a powerful desire for the concepts of freedom, the Russian political economic aggression shielded by newly developed maritime power will do little to advance either Communist ideology or Russian nationalism.

From the foregoing we can draw certain conclusions.

The Russian maritime power is great, it is increasing, and it is being skillfully used to threaten the major interests and policies of the United States and its allies.

Perhaps, by Russian miscalculation, the threat at some time may be so unequivocal as to exert a unifying influence in our domestic wrangles and may also unify our allies. But, in most cases, we can expect the threat to be equivocal enough to divide both domestic and international opinion.

Russian grand strategy plays on this diversity by following the Leninist tactic of zigzag, attacking the decision processes of the opponents, and applying equivocal threats. This, plus the fact that the processes of change are operating to an undetermined degree within Russia itself, multiplies the number of assumptions to be made and makes long-range political-military forecasting a hazardous, uncertain intellectual exercise.

Accordingly, the development of strategy to meet the Soviet maritime expansion calls not only for a precise concept of what strategy really is and what purposes it is designed to serve but also for an analysis and allocation of resources in the form of force structure, weapons and support systems required to exercise the nature and degree of control demanded by the strategy. Translating this into practical form, our national strategy must be expressed in terms of the nature and degree of control we must maintain in order to serve our national interests and attain our objectives.

This control must be exercised over both areas and situations. National strategy will include economic and political matters. Military strategy will primarily be a question of geographic areas and military situations within them.

In other words, looking at the areas and situations throughout the world, we must ask ourselves some hard questions and answer them explicitly.

What must we control? Why? What is the nature and degree of control? When initiate control? How long maintain this control? How, in general, exercise this control? What opposition to expect?

In certain areas such as the continental United States and the 50 states, the answers will be relatively simple. But as we move away from these and their contiguous waters and airspace, the answers become more difficult.

The central facts in such analysis are:

First: Not all areas and situations are equally important.

Second: The nature and degree of control will vary greatly according to circumstances.

Third: In all cases the need for control will depend on our interests and objectives.

Only when we have answered these questions can we make the decisions as to weapons systems and force structures

which, with the other elements of power, can exert the power necessary to our purpose. This process will always require a search for alternatives in which we balance our need for control against our social, political, and economic capabilities.

This is inherently a long, demanding, but always imperfect process which requires a discriminating blend of sophisticated quantitative systems analysis and intuitive professional judgment. Furthermore, the immediate political military analysis is only part of the overall national analysis which eventually involves our whole social-political-economic system.

We should not expect our American political system or that of our allies to formulate and execute a major economic military political plan with the same degree of coherence and consistency as can the Russian authoritarian system. The conceptual differences within our system are so great that every major complex plan affecting competing interests is bound to represent a compromise. Even if a good long-range plan of such nature can gain legislative approval, subsequent appropriations and budget allocations can be expected to fluctuate so as to affect the balance of the plan. This is particularly true when various political developments throughout the world change the perceptions of the threat to change.

The best we can hope for is to initiate a relatively few and relatively simple, but very expensive, major Government measures which will improve our maritime forces and stimulate or encourage private enterprise to undertake complementary programs. The Navy's role in gaining support for such goals is to prove its capacity for constructive self-criticism, to show a willingness to discipline its thinking, and to identify and concentrate on the essentials of the problem.

## BIOGRAPHIC SUMMARY

Rear Adm. Henry E. Eccles, U.S. Navy (Ret.), graduated from the U.S. Naval Academy, Class of 1922. He holds a master of science degree from Columbia University, is a graduate of the Naval War College, and is currently serving as a consultant for logistics at the War College.

He has had a variety of duty in submarines, destroyers, cruisers, battleships, and in 1946-47 commanded the U.S.S. *Washington.* Prior to his retirement in 1952, he was Assistant Chief of Staff for Logistics, Commander Allied Forces, Southern Europe. His publications include: *Military Concepts and Philosophy; Basic Logistics; Command and Control; Command Logistics; Cuba--October 1962;* and numerous articles for professional journals.

This paper is based on research conducted for the Logistics Research Project, The George Washington University, Washington, D.C., with the financial support of the Office of Naval Research.

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*Important to understanding the nature of our new maritime rival is an evaluation of her capabilities and outlook. Some consideration of her intentions--as the least of possibilities opened by the Soviet Union's burgeoning competence on the sea--is thus inherent to any useful study thereof. More important, of course, is analysis of the roles she is exploiting and may exploit in the arena of international power. Russia's own image of herself and her history is significant to this appreciation. Definitive answers are not expected at this stage, but it is hoped that the inquiry herewith begun can lead to a clearer view of some of the prospects for future years.*

# AN APPRAISAL OF SOVIET MARITIME - NAVAL CAPABILITIES

**An article by**

**Professor Edward L. Beach**

**Stephen B. Luce Chair of Naval Science**

The word "appraisal," in its dictionary sense of value setting, perhaps overstates the intent of this essay. This paper deliberately aims at laying out, in a categorical and even in a provocative way, as many aspects of Soviet maritime capability--with particular emphasis on the Soviet Navy--as possible. It does not seek to convince; that will be for a later effort. It does seek to open the way to a relevant examination of a complex situation of great import to the United States.

It is probably true that navies, more than any other system of arms, are in thrall to the past. The aphorism that the military prepares for the next war with the weapons and techniques of the last one applies to the Navy of the United States more than to either of its sister services. Reasons are easy to ascribe; the great expense of modern ships of war, their lengthy gestation through budget, design, and construction stages, their long lives. An important offshoot of this is that in the U.S. Navy there has developed what might be termed almost a fetish for perfectionism in minute detail based upon an idealistic concept of efficiency and reflecting "lessons learned" from the past. Roots of this syndrome can be found in the makeup and career indoctrination of the average American naval officer, and not surprisingly the result is a concentration on doing what has been done in the past better than before.

It is the national tradition of invention and innovation which rescues the U.S. Navy from being entirely oriented toward conceptually comfortable, if strenuously pursued, perfection of the past. In the U.S. Navy the innovators have, almost as a group, been men apart,

somehow different from their fellows. This fact reinforces the point. Perhaps concentration on past methods of doing things is endemic to all established navies.

In new navies, however, there is little "past" to draw upon; no history, no tradition, no obvious standards of measurement. Essentially, the new navy must mark itself against an absolute measure, created by its own evaluation of its objectives. Frequently these objectives must include an estimate of a potential enemy's capabilities in the context of the expected or probable confrontation. If the new navy feels that it can control the initiation and terms of the confrontation, its fundamental intentions may be revealed by the navy it builds. It, too, is partly conditioned, however, by the past of its expected adversary; it cannot entirely insulate itself against the proved capability of the old order. Hence, the "absolute standard" has a tendency to look like those of the past, despite the effort to chart a new path for the application of naval power. But if a radically changed condition can be identified, then the standard against which it measures itself can be more absolute and less repetitive of past practice.

It would be a mistake, of course, to ascribe our maritime concern at this time to such involved reasoning or to sweeping generalizations derived from it. It would be equally wrong to credit the Soviet Navy with superhuman perception because of its undeniable success in causing us concern. But it is intriguing to note that Russia is following good precedent. For instance, the fledgling U.S. Navy taught the veteran British Navy some painful lessons during the War of 1812 which it had not been able to do during the Revolutionary War of a generation earlier. A newly built German Navy did the same thing in two successive World Wars. The Johnny-come-lately Japanese Navy taught the vaunted U.S. Navy a number of equally unpleasant lessons during the early years of what Samuel E. Morison calls the "Great Pacific War." The point is that in each of these instances the new navy was able to select some special feature, a changed condition, by which its objectives were served. In 1812 it was superior American frigates; in 1914 and 1939 it was also better ships, but more important was the employment of German submarines against surface commerce; in 1942 it was better Japanese equipment and training pointed directly against the target navy (that of the United States).

Applying these thoughts to the context of 1969, one can quickly detect certain analogies; and it is possible, as well, to suggest what may be the new conditions upon which Soviet naval policy might be based. It is clear that the most important changed condition is the existence of the nuclear weapon. Second to this is the more subtle fact that war is now recognized as a nonprofitable undertaking, whatever the outcome, for the superpowers. Third, if war cannot be avoided, it is still better to win than to lose. But, even for a superpower, the definition of a vital interest worthy of the risk of national survival will be much more restrictive than ever before. This has led to the idea which has been discussed in some quarters that "a great power must be prepared to 'lose' some wars."

Thus war, in the all-out connotation of the term, would appear to have become less likely in this last half of the 20th century than it has been. Even for nonnuclear war between the great powers is this true, for the danger of escalation to nuclear war is an ever-present possibility. Herman Kahn, in characteristic summation, says that "the Soviet Union and the United States have one great common objective: avoidance of nuclear conflict."--and he goes on to declaim that no bond could be stronger. In short, strategic thinkers agree that war is no longer a rational recourse

between the superpowers except in defense of a truly vital national interest (as opposed to a semantic one). Since a "vital national interest" is defined as one a state will fight for, perhaps only the believable threat of nuclear war can make the final determination of whether or not a given matter is "vital to one or both contestants. If this is true, then the world may be in for a series of testing confrontations.

In all history, it is only recently that war has become clearly unprofitable; but this appreciation is confined to the superpowers, as is shown by the wars in Korea and Vietnam. The small powers, as of today, can still seek to achieve their ambitions by arms under the shade of the nuclear umbrella, on the theory that clever manipulation of basic conflicts between the superpowers can give them room to maneuver. With this example, a superpower might also see a possibility for profitable aggression, if it can somehow be accomplished without resort to arms and without endangering truly vital interests of any superpower, itself included. While the evidence may never be as conclusive as strategists would wish--and until it becomes entirely the province of historians instead of strategists this cannot be--the example of the Cuban missile crisis would seem to confirm this diagnosis. It is argued that there was a miscalculation in Moscow as to where the threshold of vital interest lay, and that once recognized it was carefully respected. For that matter, the many analyses of the confrontation from the U.S. side indicate that the same sorts of considerations were foremost in Washington as well. But the truly vital interest happened to be American.

These arguments do not dispose of conflict so much as they purport to indicate the sort of conflict which is likely to occur. It is the purpose of the Naval War College study of the Soviet Maritime Threat to sort out and clarify the pieces of the mosaic, to identify and consider the facets of the problem, and, hopefully, to indicate in some measure what solutions or actions are most in the national interest. Probably even this final statement encompasses too much. The study will be long continuing and thorough; it may not ever achieve specific solutions; it may, indeed, not get beyond setting out the parameters of the problem for continuing consideration over a much longer time. In the immediate sense, the objective is to set the stage for an ensuing year of research and study.

In considering the Soviet move into the world ocean, there are many functional divisions of her interest: navy, merchant marine, scientific, the fishing industry, and the use of sea movement as an adjunct of foreign aid--while aid, itself, is part of the overall push into the "Third World." If, as seems likely, the Soviet thrust has now turned to the sea and to tactics geared to a low-visibility drive for power, it is necessary that the tactical responses of the United States be considered with this carefully in mind. What these should be is far from clear; it is not even clear that there should be any overt "response." Whether it was so planned as a matter of policy or not, it appears that no Soviet move in its current maritime expansion has yet gone beyond the confines of accepted international law.

In a recent document distributed by the Office of the Chief of Naval Operations, there is the notation that the Soviet Navy has roots which go much farther into the past than its date of official creation (14 February 1918). This is shown in some detail by the article on Russian naval history which appears elsewhere in these pages. The history of Tsarist efforts to establish a navy go back to Peter the Great and the beginning of the 16th century. A landlocked nation which has always yearned for and fought for an outlet to the sea and for warm water ports free of foreign control, Russia suffered frustration after

frustration at the hands of her European neighbors. Her very geography was destructive of ambitions for the sea. Of all the nations in the world, Russia has always been farthest from having the prerequisites for seapower as described by its primary exponent, Alfred Thayer Mahan; Yet, since Peter, she has had a navy of some sort, and she has shown innovation and ingenuity, not only in the designs of its ships but also in its operational concepts and its maintenance in adversity.

Whatever we think of its political system, a nation of 230 million people is not going to be kept down, particularly when it has attained the preeminent position in Europe. For two and a half centuries, Russia has striven for free use of the only warmwater ports available to her and has been blocked by political and military machinations involving the Turkish Straits. "Keeping the Soviet Union down" is a game that may in the future become difficult to play, given that Soviet moves remain within the framework of existing maritime and international law. The Dardanelles and the Suez Canal are two cases in point. Clearly, Russia has a strong, possibly even "vital" interest in both of these waterways. If her future moves are as circumspect as those to date, the free world and the United States in particular may find it difficult to deny her the final achievement, in the fullest measure, of the free use of them, she has so long sought.

Regarding the Soviet merchant marine, a case can be made that its development is inevitable for a mature industrialized nation with the announced objective of carrying all its own foreign trade. But this merchant fleet has upon occasion--as for example with its empty freighters returning from Haiphong--engaged in rate-cutting wars with free world carriers; and since its owners and its government are one and the same, it can easily change its basis for operations from commerce, to nautical intrigue, to fleet support. The United States can also shift its basis for operations, but only with much greater difficulty, essentially only in national emergency. This gives the U.S.S.R. "cold war" advantage. The Soviets have announced installation of a computer-control complex for instant retrieval of status and location of any one of their far-ranging ships. U.S. shipping could, of course, do the same, but the national application of the computer-control system is unique. In effect, a national industry is at the instant summons of its masters. For the United States to match the Soviets there would have to be a similar computer built on a standby basis, coupled with legislation permitting nationalization of all U.S.-flag ships (and possibly flags of convenience as well) upon declaration of emergency by the President.

Profit is secondary to the Soviet merchant marine--or perhaps it would be more accurate to say that it is sometimes measured in a different coin. The Soviet image which is transmitted wherever one of its ships touches has had its own value and its concrete results. Finally, an interesting statistic may have some bearing: it appears that the U.S. Navy requires one and a half times as many support ships per major fleet unit as the Soviet Navy. Partly this is no doubt due to the existence of very large units in the American Fleet, the aircraft carriers; and doubtless, more distant deployments have a bearing. It is, however, a fact that the Soviet merchant marine, because of its status as a totally owned government business, is employed on occasion in direct support of its fleet in ways not possible to the United States.

As for the fishing industry, the Soviets have shown their traditional capability for imaginative improvements and innovation in the development of their high seas fishing fleet. Beginning shortly after World War II, large government capital investments were made to pro-

duce a fleet and to expand and modernize port facilities, repair yards, and personnel services. Recognizing that the unit cost of catching and processing fish at sea was both cheaper and more efficient than doing the processing on shore, very large mother ships were built to service the smaller catcher boats, provide them with relief when necessary, and process their catches quickly. This fleet now ranges over the waters of the entire world and consists of 4,000 ships of various classes and sizes. It is still growing steadily. At one time it was feared that the Soviet fishing industry would ignore conservation practices, and there have been cases of this sort reported. More than likely, however, these reports have reflected disputations over catch, procedures, and "traditional" fishing grounds, the Soviets being far more efficient than independent fisherfolk and totally uninterested in informal area divisions by the locals. The fact is that the Soviet Union has observed food conservation practices and is a signatory of numerous regulatory treaties and conventions.

By its nature, the large number of its units, and their methods of operation, the Soviet high seas fishing fleet is a logical instrument of surveillance or electronic intelligence ("elint") gathering. The so-called "elint trawlers"--used exclusively for intelligence collecting are indeed converted fishing-type craft, but there are also reports of covert snooping operations by ordinary fishing boats.

In the national overall orchestration of the present Soviet drive to the sea, it is important not to neglect the influence of her scientific programs and her operations in international aid. Practically all of the scientific community contributes in some measure to the growth of the navy, though prominence naturally goes to the engineers and oceanographers. There is some disagreement in the free world regarding the Soviet engineering degree program and the validity of the large numbers of graduates reported annually (in all disciplines, approximately double those of the United States), but it is nevertheless also clear that the scientific progress of the Soviet Union has been of a high order. Viewed in its proper context, Russian science has always been good (its occasional prostitution by Communist ideology excepted), and the demonstration of significant achievement by Soviet scientists and researchers bears it witness. In oceanography there are institutions throughout Russia applying their efforts primarily to furthering the commercial fishing industry with new techniques and equipment. One of the driving forces has been the inability of agriculture to meet Soviet protein requirements. The effective results of all these efforts are evident in the greatly increased fish catch (in 1970 it is expected to reach 8.6 million tons. This compares with an annual U.S. catch of 2.5 million tons.)

Perhaps the most well-known of the Soviet aid programs is that in Egypt for the Aswan High Dam, now nearing completion. While it might be overstating the case to date Soviet influence in the Arab world from her aid to Nasser with this project, there is no blinking the fact that U.S. influence among the Arab nations is today at an alltime low. Similarly, Soviet infiltration into the nations bordering the Indian Ocean--some of which are politically unsophisticated, others adroit, all relatively weak but with pronounced national aspirations--has been gradual and effective, supported by largess from Moscow. The two most important "infiltratees" in this area are India and Pakistan--if the ready acceptance of Russian aid and influence can loosely be so termed.

The foregoing briefly summarizes the Soviet aid campaign as it is seen at present. What direction it will take in future time is, of course, a matter for conjecture. If "Soviet influence" did not almost automatically spell trouble

and enmity for the Western World there would be much less concern over its creeping enlargement.

Although it is the credo of the American military planner that he must lay his plans against potential enemy capabilities and ignore "intentions"--since the latter can change so rapidly--it is unfortunately true at the same time that planning must be made with intentions also in mind, if for no other reason than budgetary refusal to accommodate all possible plans for all possible contingencies. As discussed earlier, a new navy challenging an established one sees the same considerations in a different light, especially if its planners have reason to feel they hold the initiative of the form and timing of the contest. Some evaluation of the intentions of the Soviet naval planners--which is to say, the Soviet Government--hence becomes necessary, in order to form our own objectives.

Among the heritages of the past which are still strong in the U.S. Navy is that of the war on the sea, the tradition that a navy must first seek control of the sea and that the proper way of attaining it is to destroy the enemy fleet. This was true also of the British Navy, from which ours drew so much in generations gone by. Alfred Thayer Mahan's studies reinforced this attitude, quite properly and entirely objectively. But the tradition of the battle became also an emotional matter, for it released and made intellectually acceptable those romantic notions which are still part of the makeup of Western man--submerged in the maturity of his adult years though they may be. The commanding officer of the American flagship at the German surrender of their High Seas Fleet in 1918 records in his memoirs that British officers in his cabin broke down and wept that they had not been allowed to avenge the inconclusiveness of the Battle of Jutland. Remonstrances that no victory could be greater than a surrender without a fight did not satisfy their emotional disappointment.

On both emotional and objective grounds, it is completely understandable that nothing could induce American naval officers to forego readying themselves, in all ways available to them, for the battle at sea which is still undeniably a possibility. Nor should they, so long as the possibility exists. But it is necessary for them to remain aware that for a traditional navy this involves a tremendous cost, stated explicitly in funds and effort required to manipulate such a weighty establishment, and an equally great subtle cost in terms of weaknesses they have been forced to accept or which, indeed, may be unappreciated.

It follows (and this can be a dangerous deduction if taken too literally) that the new Soviet Navy, unfettered by these same traditions of battle, operating from the conceptually advantageous position of being the challenger to the hegemony of the older navy, may have an entirely different idea of how to achieve national objectives. This would suggest that it may not feel called upon to hazard a contest between great ships far at sea. Far more likely might it see its purposes served by slow, inexorable movement of all the national forces, of which its own very self, without battle, is but a portion, though a vital portion. Such a concept of the employment of a navy approaches what the Western World has been in the habit of calling a "fleet in being." But this fleet need not be confined to harbor; it need only exist, and in existing show consummate effectiveness of its individual units and a willingness to interpose them between the West and the objectives of the West.

One could argue that it is this which has given rise to the "defensive" theory of the Soviet Navy, that this is responsible for the fact that the Soviets apparently see no requirement to match the Western fleets ship for ship, either in kind or number, and that therefore the Soviet Navy is no threat to free world

stability. Such an interpretation of the observable facts will not stand up if a different view of national and naval strategy is taken.

If the Soviet Navy has no intention of taking on the U.S. Navy in direct action, indirect action is by no means foreclosed. Indirect action may very well lead to a seafight or a series of engagements. It would, therefore, wish to ensure that the ability of its units to take care of themselves individually is well appreciated. It would want the Western navies to realize fully that a *Kashin*-class destroyer is a match for any comparable class ship in any other navy; that the *Kresta* missile cruiser has no counterpart as a multipurpose ship, first class. It would wish to demonstrate that Soviet Navy missiles do work; that it is not afraid of the open sea; that its ships can do anything ours can do, and as well--sometimes better. It would seek to prove that its submarines are efficient, the submarine force large and effective, its units perfectly able to undertake lengthy cruises. Further, the Soviet Navy would want the free world continually to witness the operational daring of its units, their truculence, their readiness, their seamanship, and their willingness to make innovations. All of this has been displayed for our full view.

Fully aware that it is the free world which is on the defensive, caught in defense of the established international order, the Soviet Union is pressing its own freedom of movement. Conceiving that the basic tactics of all free world forces, including naval forces, can only be defensive in concept, the Soviet Navy is ready and fully capable of mounting an offensive strategy in support of an aggressive policy on the part of the Kremlin, even within the constraints of being unable to match the U.S. 6th Fleet, for example. Under the nuclear shadow, Russia needs only to avoid the confrontation of vital issues alluded to earlier. To repeat, it is NATO and the free world and, by consequence, the U.S. Navy which are defensive. Not the Soviet Union. Once again we are being shown that the "offense to the defense is as three to one." The fear of escalation to nuclear exchange will cause democratic governments (because they are controlled by the mass of the people) to remain far away from the most conservative estimate of the "fatal threshold" of organized conflict. An autocracy, controlled by a few determined men, can retain the initiative by correctly estimating the location of this threshold and running a slightly higher risk of war.

In illustration of this is the idea which has been bruited about of late, that a couple of Soviet destroyers before Lebanon in 1958 might have sufficed to prevent the landing of U.S. Marines, or that Soviet surface escort of the missile-bearing freighters en route to Cuba in 1962 would have vastly changed the conduct of the crisis on the U.S. side. While this point is purely speculative, it can be agreed that the postulated situations would have had a significant impact.

What is being suggested here is that if a navy holds the option of deciding whether or not to fight, it, can by careful management, be effective without fighting. At the same time it can put its adversary to far greater effort and expense because the latter cannot be equally sure of the future. On the other hand, the navy which is designed for combat in terms of previous wars on the high seas may be at a disadvantage because its moves must always be made under the full weight of its much heavier--but unneeded-full war capability.

In support of these arguments, we find that the ships of the Soviet Navy today are qualitatively excellent. Its newest and largest destroyer type, which it calls a "missile cruiser," the *Kresta* class, mounts surface-to-air and surface-to-surface missiles, 70mm anti-

aireraft guns, sonar, and ASW weapons, all on a hull slightly smaller than the largest U.S. DLG (Destroyer Leader Missile) types. The probability is that *Kresta* does not have the cruising range of our ships of eomparable class, a eonelusion drawn from her size and what we know of previous Russian design. But this judgment should be viewed with eaution, for we should also note that a total of 195 naval ships, ineluding the destroyer elass just previous to the *Kresta*--the *Kashins*--have a very sophisticated all-gas-turbine engineering plant, something we have barely begun to consider for our own firstline ships. As engineers, Soviet designers are not neophytes.

Of eourse, we must eonsider the strong Soviet submarine force, far larger than ours and fitted with at least one weapon whieh we do not have at all, the surface-to-surfaee air-breathing guided missile (cruise missile) estimated to have a range of more than 400 miles and some sort of terminal guidanee or homing meehanism. So far as is known, it is the same missile as is earried in Soviet surfaee combatants exeept for the shorter range version in the *Osa* and *Komar* boats; and it can be aimed, apparently, at both ships and shore installations. Without question, as the Soviets themselves elaim, its eoneeptual use ineludes targeting it against major U.S. units in any belligerent eonfrontation. It has the taetical drawbaek, so far as the submarine is eoncerned, that the sub must surface to shoot it, but this takes only a few minutes. The largest Soviet cruise missile subs are nuclear powered and earry eight of these extremely sophisticated weapons. Additionally, of eourse, the Soviets have ballistic missile submarines, both eonventionally powered and nuelear powered, with their latest and best type being roughly comparable to the U.S. *Polaris* class with 16 vertieal missile tubes, its missiles targeted against land positions and able to be fired underwater.

But we find no attaek earriers, although there is evidence that eonstruetion of four sueh vessels had been planned in the later years of the Stalin era during the last revival of the "old school" naval thinking. Under Khrushehev these ships were terminated in the planning stage; and effort was eoneentrated on submarines of various types and purposes, large destroyers with various armament eonfigurations, and the *Osa* and *Komar* types hoats, similar to but larger than our PT boats of World War II, armed with a 25-mile cruise missile. That this missile works was proved when it aehieved three hits for three shots on the unfortunate Israeli destroyer *Elath* and sank her at a range of about 20 miles.

The lack of aireraft earriers has led to the deduetion, in some quarters, that the Soviet Navy is defensively oriented, as it unquestionably was a few years ago. Contrary indieation is availahle in the worldwide deployments whieh have been demonstrated of recent years and in reeent statements by Soviet naval and political leaders that their fleet is now a force able to strike anywhere in the world. On balanee, the Soviets, like the Japanese of a generation ago, have carefully evaluated the U.S. Navy, obviously their most likely adversary, and have built into their units those individual capabilities whieh in their judgment will best enable them to earry out their strategy. The erux of our problem today is to determine what that strategy is, what are its options, and what are Soviet intentions.

In the case of a conventional war at sea, whieh they probably either do not expeet, or expect will oeeur elose to the shores of Europe, it would seem that they have equipped themselves for what has been called, in another eontext, a "counterforee" strategy (the "force" in this case being our Navy). That is, they eould effectively oppose any move of the U.S. Navy which puts it at the end

of a long logistics line while theirs is favored by a short one. In a conventional war in Europe the Soviet Navy would be employed to neutralize ours, so that salvation of a threatened European nation would be possible only by escalation to nuclear exchange.

In the case of a war of nerves or tension, as has been going on since the end of World War II and as we expect is the more likely, we have evidence that the Soviets firmly understand the effective use of a navy and have in an incredibly short time provided themselves with one geared to their growing need. In 1967 Admiral Kosatonov, First Deputy under Admiral Gorshkov, spoke of the Soviet Navy as "strengthening the authority and influence of our homeland in the international arena"--and in that year was noted a difference in Soviet action at sea during a crisis. The time was the 6-day war of 1967; and what we saw was Soviet naval ships in Egyptian ports, by their presence supporting the Arabs and reducing the dimensions of the debacle.

Two important thresholds in the game of naval chicken are the shooting threshold and formal belligerency. The Soviet Navy has been shaped on the premise that the free world will endure a great deal before crossing either of these thresholds--now, because of atom bombs, more than ever before. It has learned that a navy can influence matters to go the way it wants, merely by being present while the decisions are made. It has probably noted and agreed with George Fielding Eliot's recent dictum that "One way of limiting the other side's freedom of action is to increase your own." With this in mind, the occasional truculence of its units, apparently without rationale or reason, can begin to make sense from their point of view.

As for the scene and scenario of the next power play, anyone can guess. One plausible scenario has to do with the Indian Ocean and the Suez Canal.

Soon to be abandoned by Britain, the Indian Ocean is ringed by countries ripe for the entrance of Soviet Influence, shakily governed, and vulnerable to penetration or subversion in any form of interest to an aggressor. Even if that were not of importance, there is the high cost factor involved in sending Black Sea commercial traffic around all of Africa to reach ports in the Far East. Of all the great powers, Russia has the most to gain, today, by reopening the Suez Canal. Once this is done, her lines of communication to the Indian Ocean, through which she is sending support to North Vietnam and seeking new possible points of entry into Third World countries, become about half as long as before. Where she has been developing new trade routes and carrying out an extensive program of visits by her very impressive ships, she suddenly has interior lines, shorter than those of any other of the power centers of the world.

## BIOGRAPHIC SUMMARY

Professor Edward L. Beach did his undergraduate work at the U.S. Naval Academy (Class of 1939), is a graduate of the National War College, and holds a master's degree from The George Washington University. He has had extensive duty in submarines, highlighted by command of the U.S.S. *Triton* (SS(N) 586) during its circumnavigation of the world submerged in 1960; he served as Naval Aide to President Eisenhower from 1953 to 1957; with legislative support and backup during congressional hearings for SECNAV and CNO during 1963-66; and was on the Board of Control, U.S. Naval Institute, from 1964 to 1967. Professor Beach has authored several books, his last being *The Wreck of the Memphis* (1966), has written numerous articles for national periodicals, and produced book reviews for *The New York Times* and professional journals. Professor Beach currently holds the Stephen B. Luce Chair of Naval Science at the Naval War College.

At one stroke, half the world opens to her, and this time she is ready. Even if Russia were not interested in making any effort to capitalize on the effect of her new maritime position, it would still be obvious that her opportunities and influence on the Indian Ocean littoral could not be greatly enhanced.

As C.L. Sulzberger says in a recent article, "the day will come when Moscow makes plain its desire for a privileged sea link from the Black Sea to Asia." It is clear that he was thinking about both peace and war, and that what he thinks the Soviets have in mind is a water passage that cannot be blocked by political action at the choke points, as has happened so often in the past.

It is thoroughly possible that some sort of Soviet guarantee of the Suez Canal, once it has been cleared a supervisory benevolence possibly reminiscent of the one held by Great Britain for so many years, will ensue. It would be one of the ironies of history for the continued existence of that canal, in its one hundredth year, to pass under the aegis of the one nation which--more than any other--England and France have so assiduously and for so many years sought to bar from the world ocean.

As a related but second scenario, probably floated out at a different time in order to reduce world alarm, some similar sort of action might be predicted in the Turkish Straits. Here is another "canal"--made by a capricious nature rather than by man--and it is conceivable that in due course the Soviet Union will make it clear to the world that, come what may, the waters of this strait must remain open to her under any and all circumstances. So long as it serves her purposes she will render lipservice to the Montreux Convention, but the moment this no longer is useful it is likely that she will make her own rules. No more will she suffer the ignominy of having a portion of her fleet, during a war, confined to the Black Sea by international dictum of nations not involved in the conflict. Tsushima, after all, was only two generations ago, and Russian historians cannot have forgotten that her Black Sea Fleet was not permitted to go to the aid of Admiral Rozhestvensky and his "Second Pacific Squadron."

What, then, is to be done? Or is anything to be done at this time? Perhaps the best answer, for the time being, is merely to keep a cool national outlook. The Soviet Union is barely beginning to experience some of the problems with which the rest of the maritime world has been coping for a long time. If the freedom of the seas can help bring freedom of the mind, then let us welcome her into the world ocean. It cannot be that Russians are so diabolically clever as we have been in the habit of painting them. Some of the maneuvers which to us have seemed so much to their advantage and so much against ours must really have been accidental or fortuitous; some of ours must occasionally seem pretty smart to them.

It would be well, for instance, for the Soviet Navy to experience a really wild hurricane at sea far from land; or for some of their merchantmen to find themselves attacked by rioting natives in some distant harbor, where the only assistance available happened to be from some old U.S. destroyer; or to be forced to conform to a series of apparently ridiculous local laws, simply because they *are* the law; or for Soviet Navy units to become embroiled in the confusing and sometimes embarrassing business of making port visits in foreign countries for the dual purposes of national policy–and crew rest, liberty, and recreation. All these are broadening.

In any event, the formulation of U.S. maritime policy, naval and commercial, in the face of the changed conditions described and in anticipation of future crises of the nature of those suggested, appears today to be a matter of urgency. Something must be done about

our merchant marine, even if only because the competition is leaving us so far behind. The U.S. Navy, with old tired ships still operating at the frenetic wartime tempo we thought to put behind us forever in August of 1945, is stretched too far and too thin. In the modern context of modern war--that is to say, the nonshooting contest we are now in--it must get new ships, new equipment, and reorient its thinking. Above all, the nation must calmly and objectively face the problem; for even if the solution will not wait, it cannot be treated as a matter of simple response. The factors involved are too numerous. Each calls for examination in depth. And a satisfactory answer will depend more on understanding the interplay of these factors than on responding to each, as it comes forward, in uncoordinated isolation.

Ψ

I am sure I need not point out to you the immense advantage it will be to us to have a formidable fleet in readiness.

*Lord Sandwich: Letter to Lord North*
*10 September 1772*

# NAVAL TRADITION--
# A RUSSIAN HERITAGE

*For 250 years Russia has been seeking to gain identity as a viable naval force among the maritime powers of the world. Until recently this goal remained elusive, but under Soviet leadership the Kremlin appears determined to develop a naval capability that will ensure it a major share of the world maritime action.*

**A research paper prepared by**

**Lieutenant Commander Wayne L. Chadick, U.S. Navy**

**School of Naval Command and Staff**

England, the United States, France, Holland, Norway, and Italy are among the countries which have achieved a certain prominence on the sea at one time or another in their historical development. Each of these countries proudly recalls a naval history which bespeaks the significant success of their mariners in peace and war. Each has depended upon the sea for trade and for exterior communications. All have used the sea as a means of projecting their influence throughout the world and in challenging other countries for supremacy in international affairs. All are appropriately described as having been leading seapowers. On the other hand, Russia has always been characterized as a landpower because of its short, widely separated seacoasts, its vast expanses of territory, and its long land frontiers. This preoccupation with Russia's land-oriented power has overshadowed a strong--if spotty--naval tradition. She has a rather extensive naval history, and it is not devoid of success. It is noteworthy that the Russians have engaged the Turks in no less than 12 wars or armed conflicts of equal magnitude since 1676.

The history of Russia as an organized society can be dated from the founding of the settlement of Kiev on the Dnieper River about A.D. 882. Kiev was founded by the Varangians who are associated in history with the Vikings. The ensuing years witnessed a large influx of Scandinavians who brought with them a deep knowledge of the sea and water transport. It was only natural that the chief Russian trade centers should be founded on the efficient water system they developed, using as its backbone the broad, quiet rivers. Indeed, the Viking portages between navigable rivers are now the canals of Russia's inland waterways.[1]

The north-south river system was an important factor in the development of early Russia, serving both as a commer-

cial and as a military highway. Over this "River Road," as it beeame known, the Russians had aeeess to the Baltie Sea in the north and to the Black Sea in the south. Both are elosed seas, however, separated from the open oceans by narrow hottleneeks. In eaeh case, eontrol of the hottleneeks hy an unfriendly power ean hloek Russian access to the trade routes of the world; and this has, in faet, heen true more often than not. Four times in less than 200 years (865-1043), the early Russians launehed expeditions against the Greeks (the Eastern Roman Empire or the residue thereof) at Constantinople via the river system. None of these attacks were suceessful in dislodging the Greeks who defeated them with superior technology, mostly "Greek fire."[2] During the next 600 years the Russian state was to witness the disastrous Mongol invasion and the rise of Muscovy, hut little in the way of naval growth.

Peter the Great (1682-1725) is generally considered to he the founder of the Russian Navy. Although it appears that Peter had a personal interest in the sea, it was his expansionist policy which foeused his attention upon the development of naval power. At this time Russia faeed a hostile Sweden in the north. In the south an equally unfriendly Tnrkey sought to limit Russian expansion in the Blaek Sea. Very early in his reign as Tsar, Peter was convinced that a confrontation with Sweden and Turkey would require that Russia possess a strong navy.[3]

By 1696 Russia and Turkey were at war over their Black Sea policies. In besieging the Turkish fortress at Azov on the north coast of the Black Sea, Peter made use of his naval forces to sever the sea lines of supply and thus caused capitulation of the Turkish garrison. This suceess served to confirm Peter's interest in seapower.

The Russian Navy under Peter won its first important sea battle at Gangut in 1714 against the Swedish Navy. Beeause the hattle was fought in shallow water, neither side eould use its ships of the line, and the action was eonfined to galley warfare. The Russians enjoyed an overwhelming numerieal superiority of 10 to 1, and this proved totally decisive. As a result, numbers hecame important in Peter's naval doetrine. They were frequently used as a substitute for quality, a conditioning faetor in Russian thinking for over 100 years. Peter's orders, for example, required his commanders to assure a numerical superiority of at least 4 to 3 hefore assuming the offensive.[5]

The formation of the Russian Navy hy Peter was a truly remarkable achievement. The obstaeles whieh had to be overcome in order to attain even a minimum level of sueeess were formidable. The Russian populaee shared neither Peter's understanding nor his desire for seapower. Few of his advisers appreeiated the potential advantages which a navy offered. Fortunately for Russia, the autocratie regime of the Tsar was strong enough to enforce its will; and Peter vigorously pursued his naval projeets.

At that time there was little native Russian expertise in ship construetion or operation. There was no seafaring population with the skill--nor were there the shipyards--to huild and operate the type of navy which Peter desired. In consequence, he turned to foreign countries of long maritime standing for aid.

Peter took a personal interest in naval affairs. He even traveled abroad incognito as well as in his official capacity (proud of his physical strength, he is reputed to have worked as a common shipwright in various foreign shipyards), to study shipbuilding methods in England and Holland. He acquired ships in several ways. Some were purchased outright from foreign countries; some were huilt in foreign shipyards; other were built in Russia

under supervision of foreign shipwrights. Peter's objective was to develop a Russian shiphuilding industry, and ultimately some of his ships were almost entirely products of the Russians themselves.[6]

Manning the fleet was as formidable a task as physically constructing it. Experienced officers and men were needed, and there were few of these in Russia. An extensive recruitment of foreign officers was required to produce the necessary command structure. Command of Russian ships by foreign officers became so common that by 1713 only two of the 11 ships in the Baltic Fleet were captained by Russians.[7]

Although forced by necessity to employ large numbers of foreigners to man his ships, Peter quickly realized that only by educating Russians themselves to become proficient seamen could a powerful and permanent navy be built. Because of the imperial policy of "service to the State," there were ample, though unskilled, manpower resources. A cadre of officers was formed from the landowning class; but unfortunately they found military service in general, and naval service in particular, distasteful. This attitude did nothing to strengthen an already weak indigenous aptitude for the sea. In order to provide for future leadership requirements, in 1712 Peter ordered two-thirds of the sons of landowners to seamanship and nautical training either at home or abroad.[8]

In 1725, approximately 30 years after Peter began construction of his navy, it consisted of 35 ships of the line, 10 frigates, and numerous smaller vessels. Twenty-eight thousand men were assigned. Formal nautical education was provided by several institutions, including a naval academy founded in 1715.[9] Although the Russian Navy was far from the foremost navy in the world at that time, this does show an interest and rate of growth which was superior, for example, to the nascent U.S. Navy. As a comparison, in 1807, about 30 years after Independence, the active oceangoing U.S. Navy consisted of two frigates and four smaller cruising vessels. This Navy, unlike Peter's was constrained by limited funds and existed in a politically hostile environment.[10]

Upon the death of Peter in 1725, however, the Russian Navy entered one of its periods of decline. From 1725 until the accession of Catherine as Empress (1762-1796), it experienced sporadic activity, but achieved nothing of significance. Catherine the Great gave more attention than her immediate predecessors to improving the condition of the navy, and by 1770 it was again enjoying a period of prestige. Inactivity was replaced by an increase in the tempo of operations, and a new concept of employing it as an instrument of foreign policy was developed.

It may well be that Catherine understood the political use of seapower better than Peter. Despite a confrontation with the Swedes in the north, her main policy was oriented southward and into the Mediterranean Sea. Realizing the importance of the Mediterranean to world commerce and Russia's need to participate therein, Catherine made several attempts to secure bases in the Mediterranean. At one time she even considered offering aid to England against the American colonies in exchange for Minorca! Late in her reign she tried to establish a Russian claim to Malta, but the British forestalled this in 1800, after her death, by seizing Malta for themselves.[11]

If Catherine understood what a navy meant to Russia, she was equally well aware of what a navy meant to Great Britain. Vexed by British disregard for the rights of neutral trade, Catherine joined with a number of other European nations to form the "Armed Neutrality" in 1780. This challenge to English seapower consisted of a covenant of several mercantile nations by which all participants pledged mutual cooperation,

including force, to protect their merchant shipping against all interference. The members of the Armed Neutrality supported the prineiple that neutral shipping would not he restricted in trading with helligerents except in the ease of contrahand, which was limited to arms and ammunition. They also espoused the doctrine that blockades were "legal only if effective." This meant that blockading ships had to operate physically close to the port in question. They could not seize a blockade-runner later on the high seas on the grounds that he had at one time violated the hlockade. Upholding these principles of freedom of the seas was extremely important, because Russia depended heavily upon neutral shipping for commerce.[12]

Until the reign of Catherine the Great, Russian Fleet operations had been primarily limited to the Baltic and Black Sea areas. Although Russian control of these waters was by no means secure, Catherine dispatched a fleet of 15 ships from the Baltic to the Mediterranean in 1769 as a result of the onthreak of a Russo-Turkish War and the attendant closing of the Dardanelles. Eight more followed a few months later. This operation had the full support of the British who provided facilities along the ronte. Some of the ships also had British commanders. Even so, there were many mishaps; and it took several months for the Russian Fleet to assemble. This transfer of ships from the Baltic to the Mediterranean is one of the first examples of the Russians becoming "hlne water" sailors.[13]

In July 1770, Catherine's Mediterranean Squadron won a spectaeular victory over a Turkish Fleet at Tehesme Bay on the southwestern coast of Turkey. Although outnumbered 2 to 1, the Russians attacked the Turks with fury and practically annihilated them. Several British officers participated on the Russian side, but the Russians have always maintained that it was their fighting ability and unprecedented spirit which contribnted so markedly to winning the battle. The Tsarist Navy considered this to he one of the most important events in its naval history, and several ships were later to bear the name "Tehesme" in commemoration.[14]

Like Peter, Catherine also employed a number of foreign officers in her navy. The employment of British officers was so extensive, in faet, that Catherine would have been hard pressed had the Armed Neutrality eome against determined opposition from England.[15] Ameriean naval historians are interested in this period of Russian naval history because one of the foreign officers who served Catherine dnring this period was our own Revolutionary War naval hero, sometimes called the "Father of the American Navy," John Paul Jones. He was given the rank of rear admiral by Catherine and commanded a portion of the Russian Black Sea Fleet in the Liman Campaign against the Turks.

An able commander who aggressively pressed the enemy, Jones was, nevertheless, hampered by ambitious and incompetent courtiers, hoth in the fleet and in the Russian court. When he had accepted his commission in the Russian service, it had been with the understanding that he would exereise sole command of the Black Sea Fleet. This was not to he the ease. Politics interfered, and he had to share command with others, particularly the nnprincipled Prince Nassau-Siegen. The result --inevitably--was continual friction between Jones and Nassau. Jones commanded well and won several engagements, but he never felt that he or his officers received the credit which was their due. This was nndoubtedly true. Eventually removed from his command, he left Russia following trumped-up charges of moral misconduct.[16]

John Paul Jones had a firsthand opportunity to stndy the Russian Navy. Some of his writings show a keen insight into the problems facing it and the

necessary measures to solve them. For example, Jones commented that the way for Russia to obtain good seamen was " . . . to create a merchant trade, to form an alliance with the United States, and have a squadron of evolution in the Black Sea directed by an admiral and properly instructed staff."[17] He also had some observations on the Black Sea and the undesirability of Turkish control of Constantinople:

> The commerce of the Black Sea is an object of great importance; but this commerce, so advantageous to Russia, will always be annoyed and often interrupted by the Turks, till Russia has a stronger fleet in the Black Sea to hold a rod over them, and to place the keys of Constantinople in the hands of the empress.[18]

Jones was very impressed with the capability and courage of the Russian officers and men whom he commanded. In July 1788, after the attack on Ochakov, he wrote to Prince *Potëmkin*, the overall commander, that " . . . I noted with great pleasure the unshaken and deliberate courage of the Officers of the Flotilla who seemed each to be his own General, and I have never seen greater Bravery than the Crews displayed."[19]

During the reign of Catherine, the Russians were frequently engaged in wars with Sweden as well as with Turkey. A number of naval encounters resulted, with the opposing forces sometimes equally matched and sometimes not. On several occasions the Russians, contrary to the doctrine they had inherited from Peter, fought when the weight of numbers was not on their side. At the battle of Hogland, the Russians met a slightly superior Swedish Fleet. Only one ship was lost by each side, but the Russians prevented the enemy from attacking St. Petersburg, their objective.[20] About a year later a Swedish force of 21 ships fought 20 Russian ships near Oland Island. Neither side won a decisive victory, but it was the last time such an opportunity would fall to Sweden.[21]

By the end of her reign (1796), Catherine had the third most powerful navy in the world. Her immediate successors, though less inclined to promote the navy than she, did not neglect it. At the turn of the 19th century, they began to consider round-the-world cruises for other than simply military purposes. An earlier plan to send four warships on a cruise to the Pacific in 1786 as a show of strength was abandoned when war broke out with Sweden, but in 1801, Capt. I.F. Krusenstern, a noted Russian scientist and naval officer, began preparations for a circumnavigation of the world. Designed as a scientific and commercial as well as a military venture, this voyage is interesting from several aspects. Even after more than 100 years of naval experience, the Russians still relied heavily upon the British Navy. Furthermore, his two ships were purchased from England. Nevertheless, the inception and execution of the cruise were thoroughly Russian. This venture into the Pacific, lasting over 3 years, was highly successful and established a pattern for future exploration of this kind.[22]

Russian ships also continued to operate in the Mediterranean during the early 1800's in furtherance of shifting Russian policy. The year 1827 found eight of them cooperating with 12 British and seven French ships in a combined squadron against Turkey in support of Greek independence. Their purpose was to enforce a truce which had been accepted by the Greek insurgents but which the Turks had shown reluctance to honor.

The allies operated near the enemy for several days before actually sailing into Navarino Bay where the Turko-Egyptian (Ottoman Empire) Fleet lay at anchor. The entire battle is somewhat confused, but it appears that rash firing by one or two ships resulted in a wild melee. The opposing forces were about equal in the number of warships; but within 4 hours the Turks were de-

stroyed, suffering several thousand personnel casualties.[23]

Damage to the Russians, English, and French was very light; no ships were lost and comparatively few men were killed or wounded. With the Turkish Fleet destroyed, a coordinated attack against Constantinople became possible; and the Russian admiral at Navarino strongly advocated such action. England, however, had no desire to diminish further Turkey's usefulness as a balance to Russian power in the Black Sea. When England refused to participate, the idea of a combined attack on the city was dropped.[24]

Navarino Bay was the last battle fought completely by sailing ships. With the advent of the steam age in the navies of the world, Russia turned to the United States for assistance in the introduction of steam propulsion into her navy. During the 1830's, the Tsar sent a mission to the United States to study this subject. He also ordered a steam frigate from an American yard. This ship, the *Kamchatka*, was the largest steam frigate built in the United States up until this time.[25]

A 10th Russo-Turkish War broke out in 1853 which eventually led to the Crimean War and intervention of the British and French Fleets in the Black Sea. On 30 November of that year, the Russians gave the world a demonstration in the use of naval ordnance which spelled the doom of wooden-hulled ships. The Turks had seven frigates and several smaller ships at anchor on their north coast in the Black Sea port of Sinope. Six Russian ships of the line under Admiral Nakimov attacked them, using explosive shells with devastating effect. Although this type of projectile had been used before by ships against land defenses, this was the first time in history that they had been used in a ship-to-ship encounter. In a short time the Turkish ships were destroyed. No quarter was given, and the Turks reportedly had over 3,000 casualties.[26]

The Russians considered Sinope a great naval victory. It made Admiral Nakimov famous. In a letter a few days afterward to Prince Alexander Sergewitsch, Tsar Nicholas had this to say:

> The victory of Sinope proves evidently that our Black Sea fleet has shown itself worthy of its destination. With hearty joy I request you to communicate to my brave seamen, that I thank them for the success of the Russian flag on behalf of the glory and honor of Russia. I perceive with satisfaction that Tchesme has not been forgotten in the Russian navy and that the grandsons have proven themselves worthy of their grandsires.[27]

Shortly after Sinope, a British and French squadron entered the Black Sea; and a few months later they were at war with Russia. Ostensibly the cause of the conflict was centered on the question of which church, the Roman Catholic or the Orthodox Catholic Church, would protect the Holy Places. In reality the war was fought to prevent the complete dissolution of the Ottoman Empire and the control of the Dardanelles by Russia.

The sizable Russian squadron in the Black Sea did not attack the British and French naval forces which soon appeared. Contrary to the impassioned advice of his fleet commanders, including Nakimov, Prince Mentschikov, in overall Russian command, ordered the Russian Fleet scuttled in the entrance to Sevastopol Harbor and marched the sailors into the city's fortifications as augmentation for the garrison there.[28]

Operations in the Baltic took a somewhat similar course with the British bombarding and blockading the ports and the Russian ships generally remaining out of action. Kronstadt, with its naval base, was one of the principal areas of such activity. The British had aspirations of attacking and taking this city, but it was realized that the defenses were much too strong. Although they were able to prevent the Russians

from sailing out, the British dared not sail in for an assault on the naval base. Interestingly enough, one element of the Russian fortifications were mines which had reputedly been laid in the approaches leading to Kronstadt. Both contact and command detonated types were used, and several hundred had supposedly been placed in the channel. Since the British did not try to go though the mined waters, there was no valid test of the effectiveness of these weapons at this time, but it is obvious that they were held in respect.[29]

The Crimean War was a military defeat for Russia. England and France achieved their objective, which was to keep Russia from gaining free access to the open sea through the Dardanelles. The peace terms imposed by the Treaty of Paris in 1856 locked the gates of the straits even further. Not only was passage to the Mediterranean via the Dardanelles denied to Russian ships, but also severe restrictions were placed on any Russian military and naval forces in the Black Sea or along its coast.[30]

The limitations imposed on the Russian Black Sea Fleet did not apply to the Baltic or to the Russian Navy as a whole. Consequently, they immediately began a program of strengthening and improving their navy in the unrestricted areas. Ironclads were introduced, and ship construction within Russia was emphasized. Their ironclad frigates *Sevastopol* and *Petropavlovsk*, for example, built in Russia, were sheathed with armorplate throughout their length and were considered first-class fighting ships. By 1863 the Russian Navy included a formidable force of ironclads, lightly armored steamers, and a large gunboat fleet.[31]

Frequently defeated in war and always handicapped by their environment, the Russians have never failed to rebuild their naval strength. They have learned by their mistakes and have particularly concentrated on developing types of naval warfare which are best suited to their geographic position, available resources, and professional expertise.

Under "lessons learned," the Russians fully appreciated how easily their fleets could be bottled up in the Black or Baltic Seas by the stronger naval forces of England and France. Therefore, when relations with these countries became strained in 1863, the Russians dispatched two squadrons to neutral ports in the United States. In the event of war with England or France, these ships could then be sailed to operate against the naval forces and commerce of the enemy. There was considerable speculation that the visit of these warships to Union harbors was designed by the Russians to show support for the north in contrast to the open sympathy of England and France for the Confederacy, but the preponderance of informed opinion is that the Russians were primarily interested in preserving their ships in case of a war in Europe.[32]

Naval operations during the Russo-Turkish War of 1877-78 illustrated the capability of the Russians to develop and to utilize types of naval warfare which are best suited to their circumstances. When this war erupted, the Russians had not yet completely overcome the effects of the treaty of 1856 on their Black Sea naval forces. In contrast, the Turkish Fleet was strong and included several new ironclads.

The largest Russian units in the Black Sea were the two unusual circular ironclads *Admiral Popoff* and *Novgorod*. These ships, 121 feet and 101 feet, respectively, in diameter, were the product of an imaginative and unique design by Admiral Popoff of the Russian Navy. They drew about 13 feet, and their main armament consisted of two nontrainable heavy guns in a center barbette. The entire ship rotated to bring them to bear. Six screws propelled these unique ships at a maximum speed

of about 6½ knots;[33] and they could, literally, turn in their own length.

The two "Popoffs" were ordered from Odessa to the mouth of the Danube to attack Turkish shipping, but both proved unseaworthy. Interestingly, this was not because of their peculiar circular design, but was due primarily to the ships' low freeboards and their inability to keep water off their decks. When underway it was necessary to close off ventilation, and the interiors of the two ships then became so overheated, as to be virtually uninhabitable. Consequently, the *Admiral Popoff* and the *Novgorod* were of little value as maneuvering men-of-war, but they did render useful service as moored, floating batteries in harbor defense.[34]

Without capital ships, the Russians quickly adapted themselves to two types of naval warfare which produced for them results far out of proportion to the resources required: mining and torpedo attack. They had practiced mining as early as the Crimean War. The use of these weapons for the defense of Kronstadt has already been mentioned. The Russians now turned the mine against the Turks, planting both command detonated and contact types in the Danube by means of small, steam-driven "torpedo boats." This action effectively interdicted much Turkish shipping.[35]

There were numerous Russian torpedo boat actions against Turkish ships, but none surpassed their spectacular attack on the river monitor *Seife*. The *Seife* was a powerful unit of the Turkish Navy, 115 feet long, manned by a crew of 120 men, and armed with two 80-pounder Armstrong guns. On the night of 25 May 1877, four Russian torpedo boats made a daring attack. Two spar torpedoes were exploded against the Turkish ship which sank.[36]

The driving force behind Russian mine and torpedo operations in the Russo-Turkish War was Lt., later to become Adm. S.J. Makaroff. Makaroff convinced the naval command to equip a steamer to carry four torpedo boats. The steamer acted as the mother ship, providing transportation to the area of operations and logistic support for the torpedo boats. Turkish ships were attacked at first with spar torpedoes and later with "automobile torpedoes." On the night of 25 January 1878, the Russians achieved the first tactical success in history with a Whitehead torpedo. The Turkish steam frigate *Intikbah*, 2,000 tons, was sunk by a torpedo fired at 80-yards range by a torpedo boat.[37]

Why did the Russians choose torpedo warfare, and why were they so successful? Admiral Makaroff, himself, perhaps gives the answer to that question. About 20 years after the Russo-Turkish War, he published a work on naval tactics in which he wrote:

> Torpedo attack closely resembles guerilla warfare, and therefore well suits the disposition of the Russian seaman. We may not possess the powers of systematization that characterize other western nations, but when war begins, the Russian knows that lack of organization may be replaced by personal initiative in the commanders. This is a quality which is priceless in a torpedo attack.[38]

Despite a military victory over Turkey, when peace was formalized the Russians were still denied free access to the Mediterranean. The Treaty of Berlin of 1878 did nothing more than reaffirm the provisions of previous treaties. The Russians were allowed to build a Black Sea Fleet, but Turkey retained control of the straits. Once again, British opposition was foremost in restricting Russian free access to the open ocean.[39]

After the war, Russia settled down in earnest to build a large and powerful navy, including battleships. In 1882 a 20-year ship acquisition plan was adopted which called for the addition of 15 battleships, 10 cruisers, and 11 gunboats to the fleet. This program was later increased to include 20 battleships

and 24 cruisers. Russian writings and official documents of this period evidence extreme concern about their naval strength which was vastly inferior to that of the British and the French. England, particularly, had a commanding lead in capital ships. The objective of the Tsarist naval construction program, as defined, was therefore twofold. First, it would give Russia superiority over most of the lesser powers of the world. Second, the Russian Navy, in alliance with any other large navy, would be able to contest for command of the sea with the British and thereby establish a balance of power.[40]

At this point the U.S. Secretary of the Navy ordered Naval Constructor Philip Hichborn to tour Europe, examine all facets of ships and ship construction in foreign navies, and render a full report. Russia was one of the countries which Hichborn was directed to visit. He submitted his report to the Secretary of the Navy in October 1885, and it showed that he was clearly impressed by the industry which the Russians exhibited in improving their naval posture. Hichborn noted that they were seriously endeavoring to overcome old shortcomings in shipbuilding. They had determined, for example, to develop national sources of the required materials and, by directive, used Russian wood and steel exclusively in their shipyards. Hichborn was of the opinion that the program which they had undertaken would "in a few years result in a formidable Russian Fleet."[41]

Unable to overcome the political and military obstacles which barred her from direct free access to warm water in the south, Russia turned to her far eastern frontier. In 1860 she had acquired Vladivostok, but this port was less than satisfactory for two main reasons. First, it was icebound for a significant portion of the year. Second, it was located in a disadvantageous strategic position, inside the Sea of Japan and subject to Japanese control of access, much as were Russia's Black Sea and the Baltic Sea.

During the Sino-Japanese War of 1894-95, the Japanese had captured the Chinese naval base of Port Arthur. This base had the advantages Vladivostok lacked, and when peace was declared the Japanese desired to retain this ice-free port for themselves; but with thinly veiled threats, Germany, France, and Russia forced its return to China. A few years later, in 1898, Russia occupied Port Arthur as a naval base in support of her expanding influence in Manchuria and Korea. At this time she began building up her Pacific fleet to the profound consternation of the Japanese.[42]

It soon became clear that Russian and Japanese interests in Asia were incompatible. Both countries had territorial and commercial designs on Manchuria and Korea, and the failure of diplomatic negotiations to arrive at a mutually agreeable solution made war inevitable. It was obvious from the outset that naval forces would play an important part in any armed conflict between these two powers, because command of the seas was necessary if Japan was to land and supply troops on the mainland. Russia had a tremendous numerical superiority in naval ships, but her advantage was largely negated by unfavorable geography. This prevented rapid concentration of Russian forces in the Asiatic area and, of course, resulted in poor logistic support for the ships that were there.

The Japanese struck the first blow of the Russo-Japanese War in February 1904 at Port Arthur. The Russians appear to have been somewhat less than totally alert, but they did station picket destroyers some distance outside the harbor for early warning of any impending attack. On 8 February 1904, Japanese destroyers approached the Russian units anchored at Port Arthur. Mistaken for the pickets, the Japanese were able to torpedo and damage two

battleships and a cruiser. This attack was conducted with almost reckless boldness; ironically, its successes were achieved with a weapon which the Russians had been the first successfully to adapt to naval use.[43]

It is one of the surprises of this war that the Tsarist ships at Port Arthur were damaged with a weapon which Russia had first used successfully against the Turks in 1878. From the manner in which the attack was executed, it would seem that the Japanese had been unknown students of Makaroff. In his 1898 book on tactics, Makaroff had the following additional passage concerning the conduct of a night torpedo attack:

> . . . we conclude that secrecy should be observed while we remain at a long range from the enemy to prevent their torpedo boats from interfering with us; but when the moment of attack approaches, superfluous concealment should be thrown aside, and we should approach boldly for 'God helps the brave.'[44]

The initial successes by the Japanese may partially be attributed to ineptitude on the part of the Russian command in Asia, but this was soon to be rectified. The overcautious attitude of the Russians at Port Arthur which caused them to avoid battle with the Japanese was reversed in Port Arthur when Admiral Makaroff arrived. Makaroff was the same aggressive officer who had operated so successfully with mines and torpedoes against Turkey in the Russo-Turkish War of 1877-78. In the short time which fate left to him, he made sweeping changes in the Port Arthur squadron's organization and training. Although he avoided a decisive engagement with the Japanese, which might have resulted in his defeat, he did sortie with his ships against smaller Japanese forces and lines of communications[45] and was planning larger scale operations.

The Japanese soon resorted to mining operations in an attempt to bottle their enemy up in Port Arthur. Their most successful such operation took place in April 1904. It is conceivable that the Japanese had carefully planned what later transpired among the mines on 13 April, and possibly they planted this field with the express purpose of later luring the Russians through it. At any rate, when the Russian Fleet sortied to assist one of its cruisers under attack by a small Japanese force, Admiral Makaroff was aboard the battleship *Petropavlovsk*. The main enemy battle fleet appeared, the Russians reversed course to return to port, and the flagship struck a mine and sank. Hundreds of the crew were killed, including Makaroff. Some historians consider him the most serious loss of all. For the second time in the early months of this war, a weapon which the Russians characteristically used so effectively did them serious harm when employed by the enemy.[46]

After the death of Makaroff, the war continued for some months without a decisive naval action. The Russian ships at Port Arthur made one futile attempt to reach Vladivostok, and the ships at Vladivostok tried unsuccessfully to rendezvous with them. The Port Arthur squadron, attacked by the Japanese battle fleet, retreated to the safety of its harbor, and the Vladivostok squadron was engaged at sea by a Japanese cruiser force which sank one ship and chased the remaining two back to their base.[47]

A new phase in the naval activity of the war started in October 1904. A Second Pacific Squadron was formed from Baltic Fleet units. (Markaroff's Port Arthur squadron had been the "first.") This squadron sailed from Libau for Port Arthur under the command of Admiral Rozhdestvenski in what was to be an epoch-making cruise. The difficulties which the Russian commander faced are hard to imagine in today's environment of aircraft, fast ships, modern communications, and mobile logistics. The art of underway replenishment had not been developed,

and it was necessary to arrange for a staggering amount of logistics along the way at various foreign ports. Provisioning and coaling facilities had to be obtained. Maintenance on ships and equipment had to be done en route. Even before departure, the material condition of the force left much to be desired. Training, morale, and administration were all problems of great complexity which had to be solved by the Russians in order for them to successfully transfer their ships from the Baltic to the Pacific.

In April 1905 the Second Pacific Squadron arrived at Cam Rahn Bay in what is now Vietnam, completing an outstanding feat of seamanship, leadership, and management for the Russian Navy of this time. Although the squadron had been plagued by collisions, breakdowns, and the "Japanese jitters" which had culminated in their firing on English fishing craft in the English Channel under the impression that they must be Japanese torpedo boats, Rozhdestvenski had been able to safely bring the bulk of his force into the Pacific area of operations. By this time, however, Port Arthur had fallen to the Japanese.[48]

The Second Pacific Squadron was composed of the best ships of the Baltic Fleet, and Rozhdestvenski had adamantly opposed all proposals which would have attached less capable and older units to his command. One member of his staff felt differently. Capt. Nikolai Klado, who had left the fleet during the voyage and returned to Russia, continued to advocate the formation of a Third Pacific Squadron from any ships available, whatever their age or condition. How Klado was able to prevail over the advice of the operational commander is uncertain, but prevail he did. A Third Pacific Squadron was dispatched to rendezvous with Admiral Rozhdestvenski, and he was directed to await its arrival.[49]

Klado apparently wielded considerable influence in strategic thought. Writing in December 1904, he was adamant about the requirement to reinforce the Russian naval forces in the Pacific. He not only considered formation of a Third Pacific Squadron mandatory, but he had some interesting comments in another area when he discussed another source of naval forces for use against the Japanese; the Black Sea Fleet. Klado wrote:

> And how is it that the Black Sea Squadron has thus been condemned to inactivity? The reason is simply this: we have to lament an evil time in our past life when we were worsted in an unequal war and had to yield to the unreasonable demands of our victors. First of all, we had to bind ourselves never again to keep a fleet in the Black Sea, and when we were able to obtain some modification of these terms, we had to agree never to take our fleet out of the Black Sea without the special permission of the Sultan. But are we therefore, to stand defenceless before our enemies? Certainly not! I cannot now and never should be able to fall in with anything so utterly absurd. What! To respect such shameful treaties! They should be ruthlessly torn to shreds; that is my view, and I am certain it is also that held by thousands of my fellow-countrymen.[50]

Regardless of how Captain Klado and thousands of his countrymen felt, the Russian Black Sea Fleet played no active part in the war. Once again geography proved a liability, and foreign control of the straits limited the operational usefulness of a substantial force.

Rozhdestvenski's arrival in the Pacific, his junction with the slow and obsolete Third Pacific Squadron, and the fall of Port Arthur set the stage for the final defeat of the Russian Navy by the Japanese. With Port Arthur now closed to him, the Russian admiral decided to try to slip through the enemy fleet and reach Vladivostok. Admiral Togo, with a strong force, opposed him. The Japanese were superior in every respect except in the number of battleships. A comparison of

the major units of the two sides is as follows:

| | Russian | Japanese |
|---|---|---|
| Battleships | 8 | 6 |
| Armored Cruisers | 3 | 8 |
| Cruisers | 5 | 15 |
| Destroyers | 9 | 21* |

*(plus 45 torpedo boats)

The Japanese ships were more modern, better maintained, and had a speed advantage over the Russian ships. Their crews were highly trained and had just gained combat experience in the Sino-Japanese War.[51] They were, moreover, operative on very short logistic lines.

The decisive naval battle of the Russo-Japanese War was fought on 27 May 1905 in the Straits of Tsushima. The Japanese showed their overwhelming superiority by completely destroying or capturing most of the Russian ships in the Pacific. A disastrous blow for the Russians in both men and material, Tsushima gave the Japanese unimpeded command of the sea and, of course, resulted in their victory in the war.

The Russo-Japanese War was a contest between two countries for command of the sea. Each side, to win, needed this command. The Russians had not fought a naval engagement involving capital ships since the Crimean War. Their geographic and logistic shortcomings have already been noted. They had focused too little attention on the navy's operational readiness. Even before the defeat at Tsushima, Klado wrote, "Owing to the weakness of our fleet and, above all, to our ignorance in naval matters, we are exposed to the risk of being finally defeated in this war and forced to accept a humiliating peace."[52]

Rather than discouraging them, defeat served more than ever to confirm the conviction of Russian officers that a strong navy was an indispensable requirement for the future of Russia. One high ranking general advocated strong fortifications at Vladivostok and the engagement of foreign shipyards in a program to rapidly build up a pwerful navy.[53] Klado took almost exactly the same position. In this regard there is some similarity between Klado and Mahan. Both were instructors at higher naval institutions of learning, and both were strong proponents of seapower for their respective countries. Klado believed that the future of Russia in war depended upon a mighty navy.

The Russo-Japanese War ended in 1905, and by 1909 the Russians had embarked on a program to rebuild their navy. This plan, combined with one adopted in 1912, was intended to produce 12 battleships, plus a number of cruisers, destroyers, and lesser types. Russian destroyer design was superior to other contemporary destroyer efforts in both speed and in armament. Particular attention was paid to torpedo tubes for these ships. They also began construction of the first minelaying submarine *Krab*, which was to see action in the First World War. These plans illustrate a determination to become a first-rate naval power in spite of serious obstacles such as a lack of adequate shipbuilding capacity and unfavorable geography.[54]

Russia's naval power had not, however, yet been rebuilt when the World War started in 1914. Consequently, she was not prepared to conduct large-scale offensive operations against the vastly superior German Fleet. Fortunately, Germany was engaged against an alliance that included England, the world's strongest seapower; and the existence of the British Navy prevented the Germans from concentrating on the weaker Russian naval forces.

In the Baltic Sea there were eight Russian battleships and other smaller units. The High Command decided to use these forces as a "fleet in being," a tactic which, though not decisive, had nevertheless enjoyed some success throughout naval history. Therefore, it

was concentrated in the Gulf of Finland for the protection of St. Petersburg.[55]

The character of operations in the Black Sea was somewhat different. The Russians were more aggressive and displayed a greater degree of self-confidence. Their five Black Sea battleships obviously had less prospect of having to engage a larger and more powerful German force, and this allowed them more freedom and flexibility.

The Russians excelled in mine warfare during World War I. They had made effective use of this weapon in every conflict in which they had participated since 1854, and now the mine became one of their primary tools of warfare. Defensive minefields protected their ports. Offensively, the Russians mined the likely transit lanes of German shipping. The Germans lost a large number of ships because of this tactic, including cruisers, steamers, destroyers, and torpedo boats. Mines also were responsible for damaging the *Goben* and *Breslau*, the two most important German units in the Black Sea.[56]

Russia did not remain in the war until the defeat of Germany, for the Bolshevik Revolution forced her withdrawal. The causes of the revolution had deep roots, and popular grievances had been accumulating for years. The Russian sailors, for the most part peasants, were in sympathy with the Bolsheviks and were staunch supporters of socialism. Civil war soon broke out between the Communists and the anti-Communist White Russians who were aided by the Allies. Both sides initially controlled some of the existing naval units. By the end of the war, however, there were few ships left in Russia. Some had been scuttled; some had been sunk by the opposing sides; and some had been turned over to the French for internment. For all practical purposes, the navy had ceased to be an effective force, having been reduced to three old battleships, five cruisers, and a few destroyers and submarines.[57]

The final dissolution of the navy came in February 1921. Sailors at the Kronstadt naval base who had supported the Bolsheviks in 1917 now demanded more liberal freedom and actively opposed the regime. Lenin considered them to be a serious threat to Communist control and authorized ruthless suppression of the Kronstadt movement. This was done with great bloodshed. For some years thereafter, the navy would be viewed with suspicion and distrust by the Bolsheviks.[58]

The importance of naval power in world affairs was vividly illustrated for the Russians during the Spanish Civil War. Soviet merchant ships carried supplies to the Spanish Communists and one of them, the *Komosomol*, was sunk by Franco's forces in December 1936. The Soviets protested loudly, but they had no naval units capable of enforcing their protest. As a result of this incident, the Soviet press renewed its call for the construction of a powerful navy.[59]

Beset by internal and external economic and political problems, the Communists were unable to begin to rebuild the navy for several years. There was limited activity in this regard in the 1920's, but large-scale plans did not gain momentum until about 1934. Originally the new navy was oriented toward a purely defensive role, but heated controversy over this philosophy soon arose in both the political and military spheres. The opposite position, i.e., the need for an offensive capability, was espoused by a group of officers who won Stalin over to their side. During the purges of the 1930's, most of the opposition to big ship thinking was eliminated while its proponents received rapid promotion.[60]

Realizing the military and commercial importance of a northern sea route to the Pacific, the Russians expended considerable effort in its development. The Northern Fleet had been established in mid-1933, but it was not until

1939 that the first Northern Fleet Soviet warships (five destroyers) transited to Vladivostok via the northern sea route.[61]

The decade 1930-1940 was extremely important for the Russian Navy. Government propaganda was designed to arouse public support for seapower, and Navy Day was established in 1939 as one means of educating the people on the role of the navy. Increased effort and resources were devoted to ship acquisition. Negotiations were opened in foreign countries for the purchase of ships of battleship size and for materials such as armorplate and heavy machinery. The Russians even formed a special company for this purpose in the United States. Plans were laid for the construction in the Soviet Union of 35,000-ton battleships mounting 16-inch guns. Once again it became apparent that the Russians were seriously intent on entering the world maritime arena;[62] but, again, their uncompleted plans were interrupted--this time by World War II.

Russian naval operations during the war consisted mainly of mining, minesweeping, small-scale amphibious landings, and submarine attacks. Their heavy ships consistently avoided action against even inferior German forces. This simplified the German Navy's task of keeping them from breaking out of the Baltic. Soviet submarines presented a potential threat to Baltic shipping, but they were used ineffectively and did not achieve very much. Several were lost or damaged in minefields. In 1943 a net was laid across the Gulf of Finland that prevented Russian submarines from reaching the Baltic until after the capitulation of Finland. During 1942-43, the Germans operated in the Eastern Baltic with relative impunity, losing only six small warships. Even after the Soviets launched the 1944-45 offensive, their navy played only a minor role in this area.[63]

This situation in the Black Sea was somewhat different. The only Axis naval forces here when the war began were a few obsolete Rumanian ships. Consequently, the Russian Navy exercised command of the sea for several months. It engaged in shore bombardment, mine warfare, and in amphibious landings to support the army. It also was called upon to assist in the evacuation of Sevastopol in mid-1942 as the Germans advanced. By this time the Germans had succeeded in building up a small Black Sea naval force of their own. This consisted mainly of small craft and a few submarines with which they severely restricted Soviet supply traffic, sinking about 200,000,500 tons of shipping, with no loss of submarines to themselves. A similar Russian effort at destroying German lines of communication was much less rewarding, resulting in only 15 ship sinkings in 1942-44.[64]

There are several reasons why the Russian Navy played only a minor role in World War II. First, they had no opponent on the sea. Although the Germans had a strong navy, it had been assigned to counter the British as a primary mission. Second, the Germans chose the historic overland invasion route. The invasion of Russia did not depend upon long sea lines of communication susceptible to attack by an enemy. Neither side needed a navy to win the war, but both needed powerful armies. Consequently, their resources were poured into land forces. Third, the Russians were extremely concerned with supplying the army and protecting its flanks, a task which they assigned to the navy with high priority. Finally, their chief naval opponent during the war cites one other reason why they were ineffective. Adm. Friedrich Ruge of the German Navy had this to say after the war about Russian naval operations:

> Yet no German officer who fought the Russians in 1914-1917 had any real respect for their fleet. It is true that the ships knew enough how to fire

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> their guns, and in a tight corner, the crews would fight bravely to the end. But what they always lacked--in the Russo-Japanese War as well as in 1914-1917--was the ability to make quick decisions and to exploit the ever changing tactical and operational opportunities inherent to a war at sea.[65]

Having paid a high price for victory over the Axis, Stalin sought to use Russia's contribution to their defeat as a lever in effecting political changes favorable to the Soviets. Therefore, at the Potsdam Conference in 1945, he pressed for a modification of the Montreux Convention governing the Dardanelles and proposed that the question be settled as follows:

1. The straits would be open to merchant ships of any country.

2. Unrestricted passage of the straits by all warships of any Black Sea power.

3. Passage of the straits by warships of non-Black Sea powers permitted only under special circumstances.

4. Recognition that control of the straits was under the sole cognizance of Russia and Turkey.

5. Joint organization by Russia and Turkey for defense of the straits.

The Western Powers refused to accept the last two points,[66] and the item remained unresolved.

The control of the Turkish Straits is, and has always been, a burning issue with the Russians. In his memoirs, President Truman discusses Stalin's expression of their long-standing position concerning the Dardanelles:

> With regard to the Black Sea Straits, Stalin said Russia regarded the Montreux Convention as inimical. Under this treaty, he complained, Turkey had the right to block the Straits not only if Turkey were at war but if it seemed to Turkey that there was a threat of war. The result was, he continued, that a small state supported by Great Britain held a great state by the throat and gave it no outlet. He could imagine what commotion there would be in England if a similar regime existed in Gibraltar or in the Suez Canal, or what commotion there would be in the United States if such a regime existed in regard to the Panama Canal.[67]

The British and the French demonstrated how they would react to such a regime in the Suez Canal by invading it in 1956 after it had been closed by Egypt.

Stalin's attempt to revise the Montreux Convention and his reasons illustrate once again the long-standing sense of frustration felt by the Russians. They have never concealed their resentment toward the West. It is reasonable to assume that they will continue to seek means of opening the straits, including diplomatic and military pressure on Turkey, a country which is vital to Western efforts to restrain Russia's Black Sea naval forces from becoming a threat in the Mediterranean. Recently Turkey has reportedly violated the convention by allowing Soviet submarines to transit the straits before sunrise. Turkey has denied any violation. Repeated actions of this nature could become a "de facto" revision of the Montreux Convention.[68]

A detailed discussion of the post-World War II Russian Navy is beyond the scope of this paper, but some of the salient features of its 1945-59 history can be summarized as follows:

At the conclusion of World War II, the proponents of Russian seapower retained considerable influence within the Soviet military structure, even though the navy had played only a minor role in defeating Germany. This is evidenced by a speech of Vice Admiral Abakin to a meeting of Soviet officers in July 1946. Abakin proclaimed that the Soviet Union as a great naval power had "state interest" on the seas and would take the necessary measures to defend them. He expressed the Soviet intention to continue building up a strong navy.[69]

By 1945 the Russians had abandoned the concept of the battleship as their main fleet unit. They did, however,

complete a number of cruisers and placed them in service subsequent to the mid-1950's. They also began an extensive submarine construction program which ultimately was to provide them with the largest submarine force in the world.

It was clear that Russian leaders doubted the usefulness of large surface units when Premier Khrushchev in 1956 characterized the cruiser as suitable only for a means of transportation for diplomats. The submarine program, however, still maintained its momentum.[70] A large number of both conventional and nuclear-powered submarines were completed, and by July 1962 the Russians had successfully conducted their first underwater missile launch from one of them.[71]

The impact of the 1962 Cuban missile crisis on the role of the Russian Navy is uncertain, but it is likely to have been a lesson in the value of conventional forces. Cuba presented a situation in which the Soviets were unable to successfully engage in a limited, nonnuclear conflict at sea because they lacked the necessary capability. It is probably for this reason that they began to place renewed emphasis on the more conventional aspects of naval power.

During the past 5 years, the Russian Navy has greatly expanded its worldwide operations, particularly in the Mediterranean where the Arab-Israeli conflict has provided strong rationale and justification for its presence. The Soviets have openly declared that the fleet is operating in the Mediterranean area in direct furtherance of the interest of the U.S.S.R. They did, for example, increase the number of ships there from less than 10 in early 1967 to over 40 immediately after the Arab-Israeli war. Since then the number has varied in the range of 20 to 40. It is now obvious that they intend to compete with the U.S. 6th Fleet for influence among the countries of that region.[72]

Soviet naval activity has not been limited to the Mediterranean. Russian ships have been operating with increasing frequency in other areas of the world, including the Pacific and Indian Oceans. They have even sought regular refuel and repair facilities from India. Furthermore, they have demonstrated a quick response capability in the Sea of Japan. When the United States dispatched a task force into Korean waters after the seizure of *Pueblo*, the Russians immediately sent a significant counterforce of surface combatants--estimates range as high as 14 to 16 guided-missile frigates or "cruisers"--into the same area.[73]

In his book *The Influence of Seapower Upon History, 1660-1783*, Adm. A.T. Mahan set forth six national characteristics which historically have exerted either a positive or a negative influence on a nation's development of seapower. These are geographical position, physical conformation, extent of territory, number of population, character of the people, and character of the government.[74]

Russia's geographical position, physical conformity, and extent of territory have all impeded her development as a maritime power. In spite of long coastlines in some areas, there are few good harbors. As previously pointed out, access to any open ocean area, except from her far north and most inhospitable parts, is severely restricted. Thus far, only temporary solutions to these problems have been found. Four separate fleets are not an acceptable answer to the long divided coastlines, but development of the northern sea route has at least improved her lines of communication, albeit in only a small way. Elimination of the objectionable provisions concerning control of the Dardanelles has been only partially successful, and the Russians can be expected to continue efforts to gain unlimited passage through the straits.

The remaining three elements of seapower are more susceptible to change

by the Russians themselves. The population is large, but only a small percentage has in the past been engaged in maritime pursuits, and the character of the people has, heretofore, inclined them more away from than toward the sea. This is no longer so. The Soviets have taken the advice of John Paul Jones concerning the way to obtain good seamen. They have begun to build very large, modern, and efficient merchant and fishing fleets. Finally, the character of the government in Russia has been completely totalitarian in the Tsarist period as well as now. This fact has frequently enabled a seapower-minded minority to cause an entire nation to embark on a program of naval and maritime expansion.

Naval tradition is, indeed, a Russian heritage. For over 250 years their navy has been striving for its identity among the other navies of the world. It is a history of alternate frustration and achievement. The Russians have never been quite able to develop their capabilities to the extent of other leading seapowers, but they have nevertheless kept their goal in mind. Although the urge to go down to the sea in ships has sometimes lain dormant, it has never disappeared and is now resurging more strongly than ever before.

## BIOGRAPHIC SUMMARY

Lt. Comdr. Wayne L. Chadick, U.S. Navy, is a graduate of the U.S. Naval Academy (Class of 1958) and did postgraduate work at Tulane University. He has had extensive experience in ship weapons systems, serving in this field on the U.S.S. *Canberra* (CAG-2), the U.S.S. *Semmes* (DDG-18), and more recently in the Office of the Chief of Naval Operations. Lieutenant Commander Chadick is currently a student at the Naval War College, School of Naval Command and Staff.

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Ψ

Ours is a maritime nation, requiring the most powerful navies to protect our free rights to the farthest reaches of the seas.

*Lyndon B. Johnson: To the Navy League, 27 October 1964*

# THE UNITED NATIONS AND OCEANIA:

## New Dimensions in the Cold War Refrain

*The strategic significance of oceans is a fact of modern history which underscores Mahan's classic analysis of the dependence on strategically located land bases for the effective exercise of seapower. This fact has not gone unnoticed by the Soviets who are making a sustained political assault on Western hegemony of the area through the U.N. The objective of this move is to deny the use of Pacific island areas to the United States and to make them ripe for Communist political subversion and exploitation.*

**A research paper prepared by**

**Captain William O. Miller, JAGC, U.S. Navy**

**Introduction.** Stretching from the west coasts of the Americas to the Asian mainland lies the earth's most formidable water barrier--the Pacific Ocean. This mammoth body of water comprises two-thirds of the ocean area of the world and a full one-third of the earth's surface. Interspersed throughout this vast area are literally thousands of islands, divided generally into the island chains of Melanesia, Micronesia, and Polynesia. Since Western man has navigated these waters, these islands of Oceania have been sought after jealously by the world's powers--first for the pleasure and sojourn they offered, then for their wealth, and finally for their strategic value. The peoples of these islands were extremely diverse in racial background, culture, and social customs and groupings. They had only one thing in common. They were organized, if at all, into small, fragmented, premodern societies, with no effective capacity to resist domination by any power interested in exercising it.[1]

The resulting scramble for hegemony culminated in the late 1800's in large island groupings gradually becoming subject to the colonial administration of one or another of the Western powers. Since that time, as national powers have ebbed and flowed, sovereignty or control over most of these islands has undergone frequent change. This is particularly true of the islands of Micronesia which have been under the successive control of Spain, Germany, Japan, and now the United States. These Pacific outposts became, in the early days of World War II, "footsteps"[2] for a militaristic Japanese expansion

southward toward Australia, and they formed "a series of great spider webs 'made to order' as one Japanese admiral said, to catch any unwary flies that tried to cross the Pacific."[3] Later they served the same purpose for the United States and its Allies in their successful efforts to choke off the exposed extensions of Japanese military power, and they provided successive rungs in the U.S. ladder constructed for assault on imperial Japan.

The strategic significance of Oceania is a fact of modern history which underscores Admiral Mahan's classic analysis of the dependence on strategically located land bases for the effective exercise of seapower.[4] Located as they are, athwart the maritime lines of communication from the Western Hemisphere to Southeast Asia, these islands have once--and could again--provide operating bases from which the sealanes supporting the projection of power into this area could be severed.

Such obvious strategic considerations have not gone unnoted in the Soviet Union, whose respresentatives are currently making significant efforts to recreate in the Pacific groupings of small, fragmented, polities, with no effective capacity to resist domination by a stronger power which is willing to risk adverse world opinion to exercise it--to create, once again, the very situation which existed in this area in the late 19th century. The modality of the Soviet approach is not the traditional exercise of military power, but rather a sustained political assault on Western hegemony through the medium of the United Nations and its "Committee on the Situation with regard to the Implementation of the Declaration on the Granting of Independence to Colonial Countries and Peoples," commonly known as the "Special Committee of Twenty-four."

This paper will trace the historical antecedents of the "Special Committee of Twenty-four," and it will thereafter present an analysis of the Committee's activities, which are seen to reflect an effective conversion by the Soviet Union of the international yearning for self-determination of peoples into an unrelenting cold war assault on Western presence in the Pacific Ocean area. The objective of this assault is felt to be: first, the denial to the Western Powers, principally the United States, of the use of these island areas; and second, to make them ripe for Communist political subversion and ultimately for Communist exploitation.

**International Concern for Dependent Peoples: An Historical Sketch:**

**a. The Covenant of the League of Nations.** From the timid beginnings of article 22 of the Covenant of the League of Nations, the efforts of the international community to bring about a universal application of the principle of self-determination of peoples have assumed an ever-expanding scope, It will be remembered that in the aftermath of World War I the problem of the disposition of former enemy colonial possessions was resolved by the creation of the League Mandate system under which these territories were theoretically taken under international control. Such territories whose peoples were " . . . not yet able to stank by themselves under the strenuous conditions of the modern world" were entrusted to the tutelage of "more advanced nations" who were willing to accept the "sacred trust of civilization" and to provide for their "well-being and development."

Whatever defects may have existed in this system, and there were many,[5] it must be said that the very creation of a scheme of even tenuous international control over colonial areas represented a dramatic departure from prior practices. It assumes even greater significance when it is recognized that this was a voluntary act on the part of the Western nations whose past policies had been to extend their own individual imperial

control over widely dispersed colonial possessions.[6] While it may be true that the international control of the League was of the colonial powers' own design, it did signal the beginnings of a reform movement under which the entire international community would seek to oversee the transformation of dependent peoples toward self-determination.

**b. The Charter of the United Nations.** The Second World War gave additional impetus to international concern over the problems of dependent peoples. Particularly was this true in the United States where almost all responsible officials, including the President, were of the view that the days of colonialism were past and that in the new postwar order there should be a comprehensive trusteeship system embracing *all* dependent people.[7] Although no such all-pervasive system developed, there were significant advances made toward more effective international supervision. Again, it seems important to note that these steps were taken by the victorious mandatory and colonial powers on their own initiative and despite strong opposition of some[8] because of their recognition of "the right of all people to choose the form of government under which they will live . . ."[9]

This new order for dependent peoples was to be structured on two basic concepts: first, an expanded and improved international trusteeship system with a view toward the ultimate "self-government or independence" of the trust territories;[10] and second, a declaration by the colonial powers of their duties toward, and the rights of, the dependent peoples of all territories who "have not yet attained a full measure of self government."[11]

**(1) The Trusteeship System.** The newly created trusteeship system functioned under an institutionalized Trusteeship Council composed equally of administering and nonadministering powers.[12] To be placed under this system were the territories formerly held under League Mandate, those detached from enemy control as a result of World War II, and those territories which might be voluntarily placed under the system by any of the colonial powers.[13] Only 10 of the formerly mandated territories plus Somaliland were placed under Trusteeship Council supervision.[14] In the Pacific area these included the Trust Territory of the Pacific Islands, formerly mandated to Japan but now under the administration of the United States; the Trust Territory of New Guinea under Australian administration; and Western Samoa and Nauru under New Zealand and Australian administration, respectively.

Specific trusteeship agreements were entered into with the administering powers stating specifically the terms under which the trust was to be exercised. The Trusteeship Council was invested with significant powers to oversee the exercise of these trust agreements. It was given authority to consider reports to be submitted regularly by the administering powers, to receive and examine petitions from inhabitants of the territories, and to conduct visits to and inspections of the territories themselves.[15]

It seems important to note at this juncture that through the operation of this system all of the original trust territories, with the exception of New Guinea and the Trust Territory of the Pacific Islands, had gained their independence by early 1968.

**(2) The Charter Declaration of the Rights of Dependent Peoples.** While the U.N. trusteeship system was essentially an improved version of the League Mandates, the truly "striking innovation"[16] in this area affected by the charter was the provisions of chapter XI and, more specifically, the provisions of article 73. In this article the members of the United Nations, including those

administering dependent territories, committed themselves to the proposition that the "interests of the inhabitants of these territories are paramount," and accepted as

> . . . a sacred trust the obligation to promote to the utmost . . . the well-being of the inhabitants . . . to develop self government, to take due account of the political aspirations of the peoples, and to assist them in the progressive development of their free political institutions, according to the particular circumstances of each territory and its people . . .

The administering powers further agreed to transmit regularly to the Secretary General statistical reports on the economic, social, and educational conditions in their respective dependent territories.

The covenant's "sacred trust" was thus proclaimed to embrace not only the people of former enemy territories but, indeed, to embrace the people of all dependent territories. The colonial powers had stated their formal recognition of the principle that their own, long-held colonial possessions were now wards of the international community as a whole and that the objective of their administrations, at least in the eyes of the international community, was to provide these people with such assistance as might be required for their ultimate exercise of the right of self-determination. Significantly absent, however, was any institutionalized system to oversee the exercise of this "sacred trust" with respect to any of the nontrusteeship territories.

c. The "Magna Carta" of Anti-colonialism. As noted above, the United Nations trusteeship system has functioned so effectively that all but two of the original 11 trust territories have now gained their independence. Many explanations could be given for this, not the least of which could be that the territories involved were not long-term historical possessions of the administering powers but, rather, were former enemy territories of relatively recent acquisition. Also, it is obvious that the machinery of the charter gave the international community as a whole a rather significant influence over these territories through the powers legislated to the Trusteeship Council.

In the first 15 years of the United Nations' operations, some 34 dependent territories, including eight trusteeship and 22 nontrusteeship territories, had gained their independence.[17] Nevertheless, there remained at the end of 1960, 64 dependent territories under the administration of colonial powers.[18] While, therefore, there had been major progress toward decolonization, it is quite apparent that with respect to the nontrusteeship dependencies the progress was measurably slower than was the case with those under Trusteeship Council supervision. It was to speed up this process that the United Nations, augmented in 1960 with the admission to membership of 17 ex-colonial states, took such significant action that this year must be described as the watershed in the "rising tide of decolonization."[19]

In a dramatic address before the General Assembly on 23 September 1960, Nikita S. Khrushchev, Chairman of the Council of Ministers of the U.S.S.R., stated that the time had come for the "complete and final abolition of the colonial system in all its forms and manifestations," and he submitted for the consideration of the General Assembly a draft declaration calling for the granting of immediate independence to all trust and nonself-governing territories.[20] A modified Soviet proposal later submitted proclaimed that in the colonial territories "the swish of the overseer's lash is heard . . . [that] . . . heads fall under the executioner's axe," that all colonial countries must be granted their independence forthwith "and that all foreign bases in other states must be eliminated."[21] Throughout the debates which followed, Soviet

spokesmen continued this type of vitriolic attack on all forms of "Western colonialism," giving particular and strident verbal attention to the subject of Western military bases in foreign countries and Western military alliances. Western spokesmen answered these attacks by accusing the Soviet Union, itself, of adopting a new form of colonialism which "had been imposed by force on people who had been free for centuries." They also made a specific point of stating their recognition of the aspirations of all people who did not presently enjoy a full measure of self-government and expressed a profound regret that the Soviet Union would undertake to "pervert for its own purposes the deep and genuine desires" of these peoples.[22]

Recognizing the urgent need for a resolution more moderate in tone than that submitted by the Soviet Union, and perhaps recognizing also the urgent need to attempt to remove U.N. decolonization efforts from the center of the East-West cold war struggle where it had been cast by the Soviets, 43 Afro-Asian nations collaborated in drafting a compromise resolution on this subject. This resolution was submitted to the General Assembly by Cambodia, and it was adopted on 19 December 1960, as General Assembly Resolution 1514(XV), by a vote of 89 to 0 with nine nations, including all of the Western colonial powers, abstaining.[23]

This declaration has been variously described as a "capstone to the U.N.'s efforts to supervise colonial regimes,"[24] as a kind of anticolonialism "magna carta,"[25] and as "almost an amendment to the charter."[26] Certainly, all of these descriptions are accurate, since the resolution itself[27] speaks in broader and yet more definite terms than has any similar document in history. In its operative paragraphs it declared:

> 1. The subjection of peoples to alien domination and exploitation constitutes a denial of fundamental human rights, is contrary to the Charter of the United Nations and is an impediment to the promotion of world peace and co-operation.
>
> 2. All people have the right to self-determination; by virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development.
>
> 3. Inadequacy of political, economic, social or educational preparedness should never serve as a pretext for delaying independence.
>
> 4. All armed action or repressive measures of all kinds directed against dependent peoples shall cease . . .
>
> 5. Immediate steps shall be taken . . . to transfer all powers to the peoples of these territories, without any conditions or reservations, in accordance with their freely expressed will and desire, . . . in order to enable them to enjoy complete independence and freedom.
>
> 6. Any attempt aimed at the partial or total disruption of the national unity and the territorial integrity of a country is incompatible with the purposes and principles of the Charter of the United Nations.
>
> 7. All States shall observe faithfully and strictly the provisions of the Charter of the United Nations, the Universal Declaration of Human Rights, and the present Declaration on the basis of equality, respect for the sovereign rights of all peoples and their territorial integrity.

Without a single dissenting vote, the General Assembly thus proclaimed what must be regarded as an overwhelming international consensus that the era of colonialism was past and that all of its remnants must give way to the right of all people to self-determination.

While it is true that the General Assembly is not a lawmaking body, that it can only recommend and not legislate, the overwhelming majority by which this resolution was adopted and the fact that not even the colonial powers against whom it was primarily directed dared vote against it indicate

the persuasive moral force that underlay it. Thus it must he said that, technical legal arguments notwithstanding, the international community regards it as a morally, and perhaps legally, defensible proposition that all peoples have a right to self-determination, which "demands the speediest possible ending of all colonial relationships, and condemns utterly any extension or reestablishment of colonial rule."[28]

The political lessons long tanght hy Western philosophers and statesmen had thus come back full circle, and the former pupils, now possessed of organized moral and political strength in an international setting, were reminding their former tutors in forceful terms of the lessons learned. It does seem ironic, however, that the Western nations have appeared to abdicate their leading role in this effort to their cold war adversaries in the Soviet Union.

**d. The Committee of Twenty-four.** Seizing the initiative again in the next session of the General Assembly, the Soviet Union on 26 September 1961 complained that, despite the 1960 declaration, some 88 territories still remained under colonial domination, that no steps had been taken to transfer administration to the indigenous peoples, and that, further, "the colonialist powers' network of bases on foreign soil was being used to hamper the liberation of colonial peoples and jeopardize the independence of newly independent countries." The Soviets again submitted a draft resolution for consideration,[29] and, again, it was vitriolic and vituperative in tone. It called, in part, for the final and unconditional liquidation of colonialism hy not later than the end of 1962 and for the establishment of a special commission to inquire into the situation with regard to the implementation of the 1960 declaration. A compromise resolution was again proposed by a grouping of Afro-Asian states, which, after considerable discussions repeating the acrimony of the 1960 debates, was adopted by an overwhelming vote of 97 to 0 with only four abstentions.

Resolution 1654(XVI) of 27 November 1961 reaffirmed the provisions of the declaration and called upon all states to take action "without further delay" to implement it. The resolution also established a special committee of 17 members, to be appointed by the President of the General Assembly, to inquire into the situation regarding implementation of the declaration and to make appropriate recommendations and suggestions.[30] In 1963, with the addition to its competence of matters involving the trust territories, this committee became the only U.N. body under the General Assembly which was concerned generally with all nonself-governing territories.[31]

In early 1962 the President of the General Assembly appointed the following states as members of the Special Committee: Australia, Cambodia, Ethiopia, India, Italy, Madagascar, Mali, Poland, Syria, Tanganyika, Tunisia, the U.S.S.R., the United Kingdom, the United States, Uruguay, Venezuela, and Yugoslavia.[32] At the 17th session of the General Assembly, the membership of the Committee was expanded to a total of 24 by the addition of Bulgaria, Chile, Denmark, Iran, Iraq, Ivory Coast, and Sierra Leone.[33]

With this composition it takes little imagination to envisage the philosophy which the Committee was to adopt and the course of action it was to follow. It does seem worthy of note that the Committee, from its outset, was weighed heavily against those powers which administered dependent territories. Of the 24 Committee members, 12 were ex-colonial territories, four were Soviet oriented, and only three administering powers--Australia, the United Kingdom, and the United States --were members. New Zealand, which at

the time continued to administer the Cook Islands and Niue and Tokelau Islands, was not even represented; nor were France and Portugal, both of whom continued to administer several dependent territories.

**The Committee of Twenty-four and the Pacific Islands.**

**a. Initial Consideration--Conflict with the Trusteeship Council.** As would be expected from the membership of the Special Committee, it gave its initial attention to the African dependent territories, and it would be fair to say that the problems of these African dependencies have continued to be foremost in the Committee's considerations. Beginning in 1964, however, with the formation of special subcommittees[34] to study and report on nonself-governing territories in specific geographical areas, the Committee significantly broadened its activities. It was in this year that it first began to study closely the Pacific Island dependencies. Some 16 Pacific Island areas were considered.[35] These areas were dispersed throughout the central and western Pacific, both above and below the equator, and comprised literally thousands of islands--from Pitcairn with a land area of only 4 square miles and a population of only 126, to Papua and New Guinea with land areas of over 180,000 square miles and a combined population in excess of 2 million. The Committee's task was further complicated by the fact that these island areas were administered by six separate administering powers--the United Kingdom, the United States, Australia, New Zealand, France, and Portugal.

The Committee met almost continuously during 1964, considering most of the nonself-governing territories in Pacific in some detail. Reports were submitted to the General Assembly covering each of the territories considered, and recommendations were made concerning each territory. Although these differed in detail one from the other, the same general thread ran through them all--the Committee's insistence that progress toward self-determination in all of the territories was too slow and that the people of each of these areas should be given the earliest opportunity to express their wishes with regard to their future status "in accordance with well established democratic processes under United Nations supervision." The reports were generally accompanied by reservations from the administering powers who felt either that they did not accurately reflect the conditions in the territory, that proposed visits to some of the territories were outside the Committee's competence, or that progress toward self-determination was entirely consistent with the needs and desires of the local populations.[36]

Two aspects of the 1964 Committee reports deserve special consideration: (1) the apparent conflict between the Trusteeship Council and the heavily oriented anticolonialism of the Special Committee; and (2) the growing determination of the Special Committee that complete independence must be the goal sought for all dependent peoples, regardless of their own needs or of their possible future independent viability.

Concerning the first of these, the Trusteeship Council's reports to the General Assembly, while urging the administering powers to continue their efforts leading toward self-determination in their respective territories, did express general satisfaction with the political procedures being implemented in each of them.[37] With respect to the U.S.-administered Trust Territory of the Pacific Islands, the Council took special note of the report of its visiting mission that "no fully matured opinions" had yet developed in the territory concerning its political future. Further, it expressed the hope that the "future Congress of Micronesia would direct its

attention to all the possibilities--from independence to all other options--which lay open for the future of the Territory."[38]

The Trusteeship Council's reports were in marked constrast to the findings of the Committee of Twenty-four that the progress toward self-determination in the Trust Territory of the Pacific Islands "did not fully meet the requirements of the Charter" and of the 1960 declaration and that progress in New Guinea and Nauru "had been slow and adequate steps had not yet been taken."[39]

Another area of conflict arose in the Special Committee's proposal to send its own visiting mission to the Trust Territory of the Pacific Islands. A strenuous U.S. objection was voiced to such a visit since it was considered that visiting missions to trust territories were the peculiar province of the Trusteeship Council and, were, hence, outside the competence of the Special Committee. This objection was overruled by the Committee by what has now become an almost characteristic voting pattern of 16 to 5 with 2 abstentions.[40]

It is worth noting, also, that in its 1964 report on the Trust Territory of the Pacific Islands, the Trusteeship Council expressed an approval of several possibilities of an ultimate status for a dependent territory extending from "independence to all other options." The Special Committee, on the other hand, had from the beginning steadfastly opted for complete independence as the only acceptable goal. While this may not be readily apparent on the face of the Committee's reports, it does become clear when one notes that the Committee consistently refers only to the 1960 declaration which speaks in terms of "complete independence." The two bodies consistently ignored one another, and perhaps more pertinent the General Assembly Resolution which proclaims the Assembly's understanding of the term "self-determination." On 15 December 1960, only 1 day after the 1960 declaration was adopted, the General Assembly adopted Resolution 1541(XV), which provides in pertinent parts as follows:[41] "A Non-Self-Governing Territory can be said to have reached a full measure of self-government by: (a) Emergence as a sovereign independent state; (b) Free association with an independent state; or (c) Integration with an independent state." By ignoring this resolution in its entirety and by consistently reiterating only the theme of the 1960 declaration, the Committee clearly indicated an unwillingness to accept any status short of "complete independence" as a satisfactory conclusion of the self-determination process. That such a proposition would not be permitted to prevail over the freely expressed desires of a local population for political association with its administering power fortunately was demonstrated by the 1965 resolution of the General Assembly, GA RES 2064(XX), approving the results of a plebiscite in which the Cook Islanders elected free association with New Zealand rather than complete independence.[42]

Another questionable activity of the Committee, which first became apparent in 1964, is its announced determination to carry another of the declaration's principles to extreme lengths, that no reason--smallness, isolation, inadequate political, economic, social, or educational preparation--should impede the granting of independence. In its 1964 reports on the small island territories, the Committee declared that, regardless of their size, the "provisions of the Declaration were fully applicable to . . . [them] . . . and that appropriate measures to this end should be taken without delay."

The absurd situation which this sort of thinking can bring about is illustrated by the fact that in January 1968 the Territory of Nauru, with a land area of only 8 square miles and a total popula-

tion of only 4000 persons, became an independent, sovereign state.[43]

**b. Renewed conflict and the Military Bases Issue.** The Committee's 1965 proceedings brought forth once again what was now becoming a familiar refrain. The Soviet Union, supported by its Communist friends and by most of the former colonial states, continued to urge and condemn the slowness of the pace toward independence, and for the first time the Soviet Union specifically went on record as opposing any sort of merger between the administering powers and their dependent territories.[44] More significantly, however, the U.S.S.R. used the Committee as a vehicle to continue its cold war assault on Western military bases on foreign soil, and particularly to condemn those located in dependent territories. As a result of the Committee's recommendations, a draft resolution was adopted by the General Assembly's Fourth Committee which stated that the existence of military bases in dependent territories "constituted an obstacle to the freedom and independence of these territories" and called upon the administering powers to dismantle them. When presented to the General Assembly, although these provisions received a 48 to 37 affirmative vote, they were held to have been rejected since they did not receive the two-thirds majority required for an "important question," which the President of the Assembly considered them to be. This procedural ruling was to obtain for less than 1 month, however, and on 20 December 1965 a U.S. objection based on this point was overruled; and by a simple majority the General Assembly adopted Resolution 2105(XX), requesting the "colonial Powers to dismantle their military bases in colonial Territories and to refrain from establishing new ones."[45]

The conflict between the Special Committee and the Trusteeship Council became more obvious in 1965. With respect to all the three remaining trust territories, the Trusteeship Council again indicated general satisfaction with the progress being made. In coming to these conclusions, the Council had specifically rejected Soviet proposals which would have condemned the administering powers' discharge of their trusts.[46] The Special Committee, however, reported to the General Assembly in almost the same critical terms which had been rejected by the Trusteeship Council. The voting strength of the anticolonialist bloc in the General Assembly was clearly illustrated by the resolutions adopted in which, on two of these territories,[47] the General Assembly only took note of the conclusions of the Trusteeship Council while affirmatively endorsing "the recommendations and conclusions of the Special Committee."

This vote left little doubt that, at least as far as the General Assembly was concerned, the Special Committee, with its strong anticolonialist bias reflecting that of the General Assembly, would thereafter be considered the U.N.'s principal anticolonialist tool, regardless of the provisions of the charter.

This has certainly been the case since 1965. A procedure seems to have been adopted under which subcommittees, without even "token representation" of the administering powers, will provide critical reports to the Committee which will then, almost *in haec verba*, endorse the subcommittee's criticism and forward it to the General Assembly which will do likewise. This has resulted in General Assembly resolutions during both 1966 and 1967[48] which have, in ever more strident language, condemned the "negative attitude" of the administering powers and their "repression of colonial peoples"; reasserted that colonialism is "incompatible with the Charter"; reiterated that "the establishment of military basis and installations in these territories is incompatible with the purposes and principles of the

Charter . . . and of General Assembly Resolution 1514(XV)"; requested that existing military installations be dismantled; and, finally, deplored the refusal of the administering powers to admit Committee missions to the dependent territories and requested that such missions be accepted.

**c. Conversion of the Anticolonialist Cause into a Second Cold War: the Military Bases Issue Crystallized.** Both the Committe and the General Assembly debates which preceded the above resolutions demonstrate that the former colonial states, to which "no issue exceeds in importance their commitment to securing a speedy and complete end of Western colonialism,"[49] have permitted themselves to be drawn by the U.S.S.R. into vituperative attacks on the Western states and particularly on the United States. Thus, their initial reluctance to enter this "second cold war"[50] has long since passed. The debates on the military bases issue provide clear evidence of this. At the beginning of its 1967 sessions the Committee heard the Soviet Representative, supported by many other members, condemn the existence of military bases in all dependent territories and state that "the utilization of military bases on Guam . . . showed that they created an obstacle to independence."[51] The Soviet Union also used the Committee forum in 1967 to urge that the United States should be requested to dismantle its military bases in the Trust Territory of the Pacific Islands, the provisions of the strategic trusteeship agreement notwithstanding.[52]

In May of 1967 letters were dispatched to each of the administering powers asking for information on their military activities in the territories under their administration. In July and August 1967 replies were received from Australia, New Zealand, the United Kingdom, and the United States. None were willing to provide such information, contending that their obligation to provide information on their territories was subject to security limitations and that the subcommittee had no right to ask for this type of information from them. As might be expected, this brought forth a rash of criticism of the Western Powers who, it was said, had the temerity to "challenge the Committees' right to information" and whose real purpose was to use their military bases "against freedom loving people."[53]

Although no more specific condemnation of military bases in the Pacific territories emerged from the Committee's 1967 sessions than the relatively mild recommendation that the military activity of the United States on Guam should be reduced,[54] the mere fact that this recommendation was made, based as it was on Soviet complaints that Guam was being used as a base for U.S. aggression in Vietnam, lends credence to the proposition that the force of a clear majority of the Committee's members has been enlisted in the Soviet cold war camp.

**d. Crisis.** The Committee's continued insistence on immediate implementation of the 1960 declaration and their continued rejection of any attempts by the administering powers to demonstrate that progress toward self-determination in their respective territories was in the best interests of the local population led the U.S. Representative to complain bitterly in early 1968[55] about what were termed "serious defects in the Committee's methods of work." He stated that the stereotyped and persistent call for immediate independence was improper since "it was doubtful if independence was feasible" for all of them. He also "deplored the breakdown" in communications within the Committee which frequently led to the exclusion of Representatives of the administering powers when resolutions were being drafted which were of par-

ticular concern to them. He ended his presentation with the startling announcement that

> . . . [In] view of the Committee's methods of work and the difficulties they have created for his delegation, the United States questioned whether any purpose would be achieved by further participation in the work of the Committee and was considering withdrawal. After consulting with other delegations, however, his delegation had decided to defer its decision on that question.

The United Kingdom also made strong complaints about the Committee's methods of work and provided suggestions for their change as well as for changes in the Committee's organization.[56]

The ensuing debates saw, not an attempt by the Committee to structure its activities with a purpose of achieving more progress towards its goal by diplomatic means, but, rather, a strident renewal of cold war invective. The Soviet Representative caustically attacked the United States as "relentlessly undermining the efforts of the United Nations to end oppression . . . [and] . . . attempting to crush the people of Vietnam under the force of arms." He accused the United States of occupying for many years "a number of Territories in the Pacific . . . and transforming them into air and naval bases and instruments of its struggle against dependent peoples."[57] Syria said that the United States and the United Kingdom were trying to "ridicule the Committee and discredit it." Yugoslavia and India contended that the real difficulty was not the Committee's methods, but the refusal on the part of the administering powers to cooperate. Bulgaria and Poland supported these criticisms and added their own charges of "perpetuating the colonialist yoke," "ruthless foreign exploitation," and the use of these small territories "as sites for military bases" through which to further their aggressive purposes. Finally, the Representative of Mali echoed the Communist line by arguing that the "subtle attempts" to restrict the Committee's activities were "only an extension of the desperate . . . [death throes] . . . offensive unleashed by the coalition of reactionary neo-colonialist and imperialist forces."[58]

With these stinging and bitter accusations at the beginning of the 1968 Committee sessions, the Communist states, with support from the former colonial states, gave warning that they intended to utilize the anticolonialist cause to its full measure in their cold war attacks on the United States. It soon became clear, viewing the matter from strictly a Pacific Ocean perspective, that the Soviet Union had now launched a full-scale offensive against the U.S. military bases in the Pacific which were being used so effectively to support the extension of U.S. power into Southeast Asia and which obviously could be used in the future to support a continued and strong U.S. presence throughout the Pacific. The U.S. bases on Guam drew particularly extensive condemnation. It was contended that they were typical examples of how the existence of military installations were having a negative effect "not only on the liberation of their people but also on international relations in general," and that they were being used "for intervention and aggression against the people of Viet-Nam."[59] Guam was described as "nothing but a vast military base. . . . [whose] . . . population had been inducted into the foreign army,"[60] and the United States was accused of using the islands of the Trust Territory of the Pacific Islands as missile and airbases and of planning a further expansion of its military activities in that area. Australia was attacked for what was said to be "military preparations . . . [in Papua and New Guinea] . . . for the conduct of the aggressive war in Viet-Nam and for the direct induction of indigenous soldiers

into that war."[61]

During these 1968 proceedings the Representative of the Soviet Union spelled out succinctly what lay behind the Soviet offensive. In one of his most biting attacks to date, he said on 25 June 1968:[62]

> The information before the Committee showed that the strategic significance of small Territories, especially islands, had increased, because they could be used for supporting far-reaching military operations. That was particularly true of the island of Guam, a United States Colony in the Pacific Ocean, which had been turned into a military fortress . . . [T]he military headquarters of the region, an American Naval base at Apra Harbour, the Agana naval air station and the Anderson Air Force Base were on Guam. Some 38,500 servicemen and their dependents had been attached to these bases in 1967. The Anderson Air Force Base was the staging point from which the B-52 bombers were used for the aggressive war against the Viet-Namese people who were battling for their freedom and independence . . . and Guam was being used . . . for Polaris submarines which were patrolling Chinese waters.

This should have made it crystal clear, even to those who would not see it before, that the Soviets' true purpose is the conversion of the U.N.'s efforts toward self-determination into one of its principal cold war weapons. To deprive the United States of the strategic island bases from which its power can be effectively projected in aid of a small nation under Communist pressure or attack would be a major cold war victory indeed.

At the time of this writing no results of the Committee's studies on military activities in the dependent territories have been announced. It seems likely, however, that it will once again condemn the administering powers and that it will once again resolve that their military activities in these territories hinder progress towards self-determination and that they should cease. It is only to be hoped that the former colonial members of the Committee will come to see how their desire for the self-determination of all peoples is being capitalized upon and used by the Communist states and that they will not permit the Committee's reports and recommendations to be further utilized as a source of international support of Communist cold war objectives. It does seem obvious, however, that the majority of the Committee has permitted its purpose to be converted from that of an international overseer of the self-determination process into that of a forum for propaganda assaults on the U.S. presence in Southeast Asia and in the Pacific Ocean area in general. Whether or not the United States will, or should, continue to participate in the Committee's work in the face of such unreasoning assaults is a matter which will have to be given careful consideration before the 1969 sessions begin.

**Conclusion.** There is no question but that the yearning of the world's peoples for control over their own political destinies is a fact of 20th century life which must be intelligently dealt with by the present administering powers, the dependent peoples themselves, and the international community as a whole. There also seems to be little doubt that the activities by the United Nations, to date, both in the Trusteeship Council and in the Special Committee of Twenty-four, have given considerable momentum to the self-determination process. The independence of Nauru and the U.S. announcement of a planned 1972 plebiscite in the Trust Territory of the Pacific Islands[63] are only the most recent evidence of the effect of international pressure through these U.N. organs. What seems to be lacking in the process, however, at least as viewed by a majority of the members of the United Nations, is the realization that the continued insistence on "complete independence" as the only acceptable goal of the self-determination process can,

and undoubtedly will, lead to the same type of fragmented, nonviable, political picture in the Pacific as that which created world tensions in the 19th and first half of the 20th century. Certainly the anticolonialists are right when they describe the struggle for colonial empires as a source of world conflict which can lead to war, and if this type of conflict is to be avoided in the future, it seems essential that conditions should not be re-created which could lead to this same type of instability and struggle.

This is not to say that the peoples of any particular Pacific Island territory should not be enabled to opt for complete freedom, unassociated with any stronger power, if it is their desire to do so. It *is* to say that these people should not be pushed into such an option if it is really not in their best interests.

The smallness, the isolation, and the lack of adequate economic resources to make them self supporting, clearly dictate for almost all of these areas some sort of association–at least economic and defensive--with a stronger power which can provide continuing assistance to them. As political opinion in these areas matures, it should become obvious to the people that such an association, rather than complete freedom, will be most conducive to their long-term interests. It is therefore considered that given the time and the opportunity to develop their political maturity, self-determination in these small island territories will follow the lead of the Cook Islanders--a free association with the administering power which leaves the population in complete control over its internal processes but which continues the responsibility of the administering power over external affairs.

There is a very distinct danger existing, however, in the failure of the former colonial members of the United Nations, and more specifically those on the Committee of Twenty-four, to discern the real interests of the peoples of the Pacific Island dependencies. These nations have been led to commit their voice and their vote to the Soviet cold war cause, a cause which, although using self-determination as a banner, perverts that banner into a weapon through which it can attack the very nations that gave self-determination its start.

A crucial diplomatic problem for the United States today, and indeed for the people of the Pacific Island dependencies themselves, is to prevent this type of Communist distortion to so hasten the self-determination process in the Pacific so as to result in long-term, serious disadvantage to the local peoples by the re-creation of conditions which will make them ripe for a new scramble for hegemony.

## BIOGRAPHIC SUMMARY

Capt. William O. Miller, JAGC, U.S. Navy, did his undergraduate work at the University of South Carolina and holds a bachelor of laws degree from Atlanta University and a master of laws degree from The George Washington University. His numerous legal officer assignments include: duties with the Office of the Judge Advocate General as Appellate Counsel and in the International Law Division; Assistant Legal Officer, Headquarters 14th Naval District; and Assistant Legal Officer, Commander in Chief, Pacific Fleet. Captain Miller is currently a student at the Naval War College, School of Naval Warfare.

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32. *United Nations Yearbook 1960,* p. 51.
33. *United Nations Yearbook 1962,* p. 60.
34. The three subcommittees were established in 1964, generally for Africa and the eastern Indian Ocean, Asia and the Pacific Ocean, and the Atlantic and Caribbean areas. *The United Nations and Decolonization,* p. 10.
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| Territory | Adm. Power | Area (sq. mi.) | Population |
|---|---|---|---|
| Timor | Portugal | 7,332 | 500,000 |
| Brunei | United Kingdom | 2,226 | 104,000 |

| Territory | Adm. Power | Area (sq. mi.) | Population |
|---|---|---|---|
| Fiji | United Kingdom | 7,055 | 400,000 |
| Cook Island | New Zealand | 93 | 18,500 |
| Niue | New Zealand | 100 | 4,900 |
| Tokelau | New Zealand | 4 | 1,900 |
| Nauru | Australia | 8 | 4,000 |
| Papua | Australia | 87,540 | 500,000 |
| New Guinea | Australia | 93,000 | 1,500,000 |
| American Samoa | United States | 76 | 20,000 |
| Guam | United States | 209 | 50,000 |
| Trust Territory of the Pacific Islands | United States | 687 | 90,000 |
| New Hebrides | United Kingdom/France | 5,700 | 60,000 |
| Gilbert/Ellice | United Kingdom | 369 | 47,000 |
| Solomons | United Kingdom | 11,500 | 130,000 |
| Pitcairn | United Kingdom | 2 | 126 |

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# SET AND DRIFT

**Board of Advisers.** Four new members of the Board of Advisers to the President, Naval War College, made their appearance at the spring meeting of the group held at the War College 11 and 12 April 1969. Formed as a 12-member advisory council in the educational and support areas, the board meets three times a year to examine educational, doctrinal, and research policies and programs at the War College. Opinions and recommendations reached by the board are submitted directly to the President of the War College to aid him in more effectively accomplishing the institutions's mission.

Among the new members attending their first meeting was the recent War College president, Vice Adm. John T.

**BOARD OF ADVISORS--Members of Board of Advisors at Spring meeting with Vice Admiral Richard G. Colbert, USN, President, Naval War College, are (standing, l to r) Dr. Maurice F. Tauber; Vice Admiral John T. Hayward, USN (Ret.); Admiral Colbert; Ambassador Charles E. Bohlen (Ret.); and Vice Admiral Bernard L. Austin, USN (Ret.). Seated (l to r) are: Dr. Thomas W. McKnew; Emilio G. Collado; Mr. J. Carter Brown; and Mr. Stanley Powell, Jr.**

Hayward, USN (Ret.), now Vice President for Research and Development, General Dynamics Corporation. He was involved in the formation of the board and was president of the War College at the board's inaugural meeting in May 1967.

Other new advisory board members at the April meeting were: The Honorable Charles E. Bohlen, retired career Ambassador; Mr. J. Carter Brown, Deputy Director, National Gallery of Art; and Dr. Thomas W. McKnew, Advisory Chairman of the Board, National Geographic Society.

Four of the original members of the board also attended the spring meeting and included: Vice Adm. Bernard L. Austin, USN (Ret.), former War College president; Mr. Emilio G. Collado, Executive Vice President and Director, Standard Oil Company of New Jersey; Mr. Stanley Powell, Jr., President, Alexander and Baldwin, Inc.; and Dr. Maurice F. Tauber, Columbia University Melvil Dewey Professor of Library Science.

Friday, 11 April, was devoted to individual briefings, participating in student activities, and attending a special review and critique of the Planning Exercise and War Game (PLANEX I), the first full-scale planning effort to be accomplished by students of the School of Naval Command and Staff.

Saturday morning the Board of Advisers conducted a business session to conclude the spring meeting. On its agenda were discussions of the image of the War College, plans for attending the 1969 Global Strategy Discussions, the Soviet maritime challenge, student expansion and facilities development program, library plans and improvement program, and the War College budget.

The Board of Advisers unable to attend the April meeting were: Mr. William W. Foshay, Sr., partner in the law firm of Sullivan and Cromwell; Mr. Henry S. Rowen, President, Rand Corporation; and Dr. Edward Teller, Associate Director, Lawrence Radiation Laboratory, University of California.

**Chair of Economics.** The Chair of Economics, established on 1 July 1967, has been designated the Theodore Roosevelt Chair of Economics, as approved by the Chief of Naval Operations on 21 March 1969.

Present occupant of the Chair, Professor Philip L. Gamble, provides professional advice and guidance directly to the President of the Naval War College, staff and faculty, and to the students in matters pertaining to the field of national and international economics.

He conducts the Economics Course in the Fundamentals of Strategy Study; participates as a lecturer and consultant in other studies of the core curricula of the resident courses; and conducts research seminars and elective courses in the cooperative curricula oriented to individual student intellectual development and academic achievement as well as other related academic participation.

**Indonesian Visitor.** Rear Adm. Koen Djelani, Commandant of the Indonesian Naval War College, toured the Naval War College 8 and 9 April 1969 as part of a 2-week orientation visit to the United States.

Admiral Djelani, in addition to his current assignment, is Chief of the Indonesian Navy Research and Development Center, Chairman of the Maritime Defense Institute, Chairman of the Board of the Command and Staff College, as well as a member of the MPRS (National Legislative Assembly), an organization comparable to the U.S. Senate.

Accompanying Admiral Djelani on the Navy Military Assistance Program-sponsored visit was Lt. Col. Franciscus B.A. Octoro, current Head of the Indonesian Naval Psychological Institute.

**Nonresident Graduates.** In this month of graduation ceremonies

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**REVIEWING *REVIEW*--Rear Admiral Koen Djelani (left center), Commandant of the Indonesian Naval War College, and Colonel Thomas C. Dutton, USMC, Director of the Correspondence School, discuss *Naval War College Review* while Colonel Teddy A. Natanegara, (left), Indonesian Navy student, and Lieutenant Colonel Franciscus B.A. Oetoro, Head of the Indonesian Naval Psychological Institute, look on. Admiral Djelani visited 8-9 April 1969.**

throughout the land, recognition is in order for a few students who cannot be on hand for a ceremony. These are the nonresident students of the Naval War College who have completed one of its special composite programs throughout 1968 and up to 1 April 1969:

**Correspondence Course of Naval Command and Staff.** (Diplomas awarded after completion of five NC&S courses)

Maj. Jerald A. Mortensen, USAR
8 January 1968
Lt. Comdr. Grant F. Sandy, Jr., USNR
15 January 1968
Capt. Walter W. Honour, USN
6 March 1968
Col. John G. Whytlaw, USAF (Ret.)
22 March 1968
Comdr. John C. Gould, MC, USNR
24 May 1968
Comdr. Jamieson K. Deuel, USN
19 August 1968
Dr. Martin W. Trawick
19 August 1968
Comdr. Claud H. Corrigan, USNR
19 August 1968
Lt. Comdr. Stanley P. Thompson, USN
30 August 1968
Col. Fred E. Bamberger, USAFR
10 September 1968
Lt. Comdr. Herbert K. Biegel, USN
14 September 1968
Comdr. James B. Hardgrave, Sr., USN
28 September 1968
Col. Rollins H. Mayer, USAFR
30 September 1968

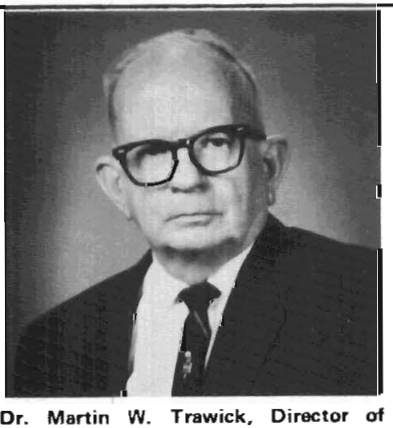
**Interim Course of Naval Command and Staff.** (Diplomas awarded after completion of 1 month's resident study and subsequent correspondence course requirements.)

Comdr. Jamieson K. Deuel, USN
Comdr. Orrin B. Ross, SC, USN
Comdr. Millard J. Johnson, SC, USN

The President of the Naval War College congratulated these students for their initiative and diligence when forwarding their diplomas and now makes this more public recognition of their achievements which were accomplished while carrying out full-time duties elsewhere. Among these graduates are two "firsts"--

Commander Deuel's simultaneous graduation from both programs, publicized in the *Naval War Collge Review* of November 1968;

Dr. Trawick's accomplishment as the first civilian graduate of any Naval War College composite Correspondence Course.



**Dr. Martin W. Trawick, Director of Research and Superintendent, Photo/ Instrument Engineering Div., Aero Mechanics Dept., Naval Air Development Center, Johnsville, Pa.**

**Senior Officer Executive Management Course.** On 20 July 1969 about 30 to 35 flag officers of the Navy and general officers of the Marine Corps will assemble at the Naval War College for a 3-week course in the theory and practice of modern management. The second Senior Officer Executive Management Course (SOEMC) will be modeled on the successful first SOEMC held during the summer of 1968 (*Naval War College Review*, November 1968). As indicated by student comments, the previous session succeeded in imparting to the 40 participants:

a. A sense of urgency for change and periodic reexamination of both objectives and the means for implementation.

b. An appreciation of the human dynamics of interactive-cooperative planning.

c. A respect for the usefulness of planning and control theory and of formal planning models.

d. An exposure to the latest techniques and tools (mathematics, model building, systems analysis, computers) used by managers to improve the efficiency of their decisions.

e. The significance, for managerial behavior, of the environment and of various institutions in the society (economic, political, labor unions).

The 1969 program will strive to attain these same objectives. While a somewhat more selective size class is being planned for, a similar broad range of experience is expected in the flag and general officers of the naval service who attend.

Professor Zenon S. Zannetos of the Alfred P. Sloan School of Management, Massachusetts Institute of Technology, is Chairman of the Advisory Group charged with development of the course. He is assisted by the occupant of the Naval War College's Forrestal Chair of Military Management, Professor Edward B. Roberts, and the MIT Sloan Fellows Professor of Management, Professor Charles A. Myers. The School of Naval Command and Staff has the overall planning responsibility for the 1969 SOEMC.

*A maritime nation's raison d'etre for a merchant fleet is to add to its GNP, to provide maritime lift for national defense, and to add to its international prestige. Since there is no economic gain for the United States through subsidizing the merchant service, and prestige is not quantifiable to the economist, the most relevant basis for a substantial merchant service is national defense. The defense requirements for a merchant marine are most critical in a limited war environment, and it behooves the Departments of Commerce and Defense jointly to determine programs to meet this need.*

# THE NATIONAL DEFENSE REQUIREMENT FOR A U.S.-FLAG MERCHANT MARINE

A research paper prepared by
Major Robert E. McCleave, Jr., U.S. Army
School of Naval Command and Staff

## INTRODUCTION

> . . . our commerce has expanded so enormously that it is not only a question of profit but of serious necessity that we should manage it--and yet, with every impulse, every activity insisting that we should assume our place in the world, our Merchant Marine is in a state of decadence.[1]
>
> Upon the direction which those steps may lead us is to depend the future of our merchant marine. If they lead us aright, it will survive. And if not--not.[2]
>
> Today our merchant fleet is not only in the doldrums, it has been sinking fast.[3]

The three statements above represent 85 years of contemporary thought on the status of the U.S.-flag merchant marine; a patient who is perennially at death's door but who, with the aid of continuous transfusions, manages to outlive generations of his physicians. Unfortunately, the fact that the "patient" has been and evidently can be kept alive through programs that treat the symptoms while allowing the disease to run riot has lulled the industry, Government, and people into a soper, deep and serene, so long as periodic public pronouncements of impending doom and other assorted breast-beatings assuage the collective conscience. For life-sustaining measures can be tolerated, but the Nation is unwilling to endure either the trauma of the patient's death or to face the short-term economic, political, and social costs

required of a true recovery is to be expected.

Although the "merchant marine problem" has provided grist for academic, political, and military mills for the better part of a century, the era of the cold war has added a dimension that Lieutenant Kelley would not have even considered. This is the requirement for the extended deployment of large expeditionary forces under circumstances where neither a war nor a condition of national emergency exists. In this situation a merchant fleet may be called upon to perform wartime service with peacetime assets and under peacetime regulations, resulting in a vicious "whipsaw" of rising requirements vs. declining capabilities with no built-in mechanism to restore a condition of equilibrium.

It is this military-oriented aspect of the overall problem that will be considered in the paper here presented. Drawing on recent national experience, an attempt will be made to redefine the position of the U.S.-flag merchant marine within the context of the threats to which American military forces might be required to respond. An evaluation will then be made as to the merchant fleet's current capabilities, and recommendations offered as to the size and tailoring of the U.S. merchant marine if it truly is to be the "Fourth Arm of Defense."

## I--WHY A MERCHANT MARINE?

Maritime nations support merchant fleets for three reasons:

a. To add to the total of their GNP.

b. To serve as an arm of their national defense.

c. To add to their international prestige. Although the fulfillment of all three purposes would be to the unquestioned benefit of any nation, the absence of any one or two rationales can be accepted, depending upon that nation's wealth, geographic location, and international position. For example, at the lower end of the wealth and power spectrum we have Liberia, a small state with the world's largest merchant marine in tonnage at 36.4 million d.w.t. and third largest in numbers with 1,423 registered vessels.[1] Liberia is without significant international prestige and has no vital national interest dependent upon her own shipping for protection. But Liberia is a poor country with limited economic resources, and the foreign exchange earned through the remittances of American, Greek, and other shipping concerns using her as a low-cost and flexible haven for international operations is significant; for the Liberian merchant marine is neither owned nor manned by Liberian citizens; and if it were not for the incentive of her rather liberal registry laws, it is doubtful that there would be a single Liberian merchant ship on the high seas, as indeed there wasn't prior to 1948.[2]

Norway is a nation whose interest in a national merchant marine is far more substantial in basis than Liberia's. Although the Norwegian international position is not such as to necessitate a worldwide display of her flag, she is a nation dependent upon a merchant fleet for both commercial earnings and the employment of her citizens. Her landlines of communication are long and indirect, thereby easily interdicted by potential enemies and adding national defense to her reasons for maintaining a merchant marine. Although economic gain is by far the strongest rationale for her maintenance of the world's fifth largest in number (1,371 vessels) and fourth largest in capacity (27.3 million d.w.t.)[3] merchant fleet, her need for sealines of communication would justify some vessels even if an economic cost were entailed.

The United Kingdom is one of those few nations that enjoys all three benefits of a national-flag merchant marine. With the world's largest operational fleet of 1,928 ships,[4] she enjoys a substantial income from profitable commercial operations; as an insular and

trading nation she requires extensive shipping under her direct control for national defense; and as one of the world's leading powers she gains much added prestige from the display of the Red Ensign worldwide by so large a merchant fleet and the great "visibility" of a small but impressive coterie of passenger liners.

In the United States we have a nation whose merchant marine has made little contribution to her peacetime economy for as many years as one cares to remember. However, the experience of past wars and the continued requirement for large-scale U.S. forces abroad have forced the retention of a large active fleet even at the cost of substantial Government subsidies and the Federal financing of a reserve fleet for military emergencies. This, plus the continued support of a small but expensive passenger fleet and the world's only nuclear merchantman, shows that the United States is willing to entail considerable economic expense to provide a merchant fleet for both national defense and international prestige.

The Soviet Union represents the most complex of cases, for here we find legitimate commercial interest so intermeshed with national defense, on one hand, and politico-economic warfare, on the other, that it is difficult to determine which interest or interests are controlling. The impressive size and rate of growth of the Soviet merchant fleet are apparent in table I.

Two factors are most significant. One is the truly phenomenal growth that has occurred since the period of the Cuban missile crisis; while the other is the fact that with a foreign trade level one-quarter that of the United States, the Soviet Union has built a merchant fleet that is already three-quarters as large as the American fleet.[5] Thus, Russia is not only achieving maritime self-sufficiency, but she is well on the way toward developing a surplus of shipping available to all bidders. Already Soviet ships delivering supplies to North Vietnam are hauling return cargoes of Australian wool at rates 7.5 to 15 percent below those of the Australian conference.[6] Although willing to settle differences and even to join the rate-making conferences, the Soviets have made it plain that the price for their cooperation is a significantly larger share of the market than normal distribution formulas permit.[7] Whether the Soviets are merely

**TABLE I--SOVIET MERCHANT TONNAGE[a]**

| Year | Thousands of Gross Tons |
|---|---|
| 1918 | 865 |
| 1939 | 1,315 |
| 1958 | 3,000 |
| 1961 | 3,839 |
| 1966 | 9,811 |
| 1968 (fiscal year) | 12,062 |

[a]U.S. Congress, House, Committee on Merchant Marine and Fisheries, *Maritime Manpower Shortage,* Hearings (Washington: U.S. Govt. Print. Off., 1966), p. 162; U.S. Congress, Senate, Committee on Commerce, *Subsidies for Bulk Carriers,* Hearings (Washington: U.S. Govt. Print. Off., 1962), p. 80; U.S. Maritime Administration, *A Statistical Analysis of the World's Merchant Fleets* (Washington: U.S. Govt. Print. Off., December 1967), p. 1; "Shipbuilding and Machinery Review," *Fairplay International Shipping Journal,* 14 November 1968, p. 25.

trying to find employment for shipping built to handle the peak requirements of emergencies, such as the Cuban missile crisis, as well as their own legitimate commerce or are deliberately fostering a shipping war as a form of economic pressure on the West is open to question; but one fact remains clear: that whatever the reason, Russia is a maritime power of the first magnitude, and her growth curve is still accelerating.

Although the above is perhaps an oversimplification of a very complicated situation, it does serve to indicate that there is a broad spectrum of rationales for the maintenance of national-flag merchant fleets that transcend normal economic considerations. Within this spectrum the United States occupies a particularly interesting position in that a large American-flag merchant fleet, a private industry, is supported with Government funds. The situation exists nowhere else in the world.

The economic value of the U.S. merchant marine was definitively explored by the Transportation Center at Northwestern University between 1958 and 1961 in a study sponsored by the Committee of American Steamship Lines.[8] This significant effort scrupulously avoided national defense considerations and determined that whatever the gain which was accruing to the United States through the maintenance of a subsidized merchant service, it was not an economic gain.[9] When one considers that this was an industry-sponsored study, the negative results lend credence to its objectiveness. More recent data indicates that little has occurred during the decade of the sixties to herald a change in the situation. In 1966 the total contribution of both domestic and international water transportation to the U.S. GNP was a mere 0.4 percent, with commercial shipbuilding adding but another 0.02 percent.[10] From this must be subtracted almost one-half billion dollars in direct and indirect subsidy payments, thus rendering it quite evident that the United States is not looking to its merchant fleet for a contribution to its livelihood. Indeed, a good case could perhaps be made for the improvement of the economic well-being of the country through the elimination of the merchant fleet.

This is not to say that there is absolutely no economic advantage to be gained from a U.S.-flag merchant marine. During periods of greatly expanded vessel demand such as the Korean war (1950-53), Suez crisis (1956), Vietnam war (1965-?), and second Suez crisis (1967-?), the availability of ships from the Maritime Administration's reserve fleet prevented a skyrocketing of shipping costs. The overall savings in avoided freight-rate increases to American shippers have been estimated at 250 percent for the Korean war period and 33 percent during the 1956 Suez crisis.[11] Translated to dollars, this represents $3 billion and $0.5 billion respectively. The fact that at least a nucleus active industry is required, if the expansion capability of the reserve fleet is to be realized, must be kept in mind. Here, perhaps, we find economic and military rationales impinging upon one another.

The nebulous, yet very real factor of national prestige is a matter which the world's most powerful nation must consider in all areas of endeavor. Since prestige is not quantifiable, it receives scant attention from most economists; yet its existence can be attested to by the retention of the NS *Savannah* in service by the 90th Congress despite her $3.2 million subsidy requirement.[12] What level of merchant fleet would be supported by the United States if national prestige were the only relevant factor? This is a difficult, if not impossible, question to answer. It could be adduced, however, that the nuclear propulsion program, some elements of the international passenger fleet, and certain other very "visible" ships would

be snpported hy Government assistance for their prestige or public relations value alone.

Since economic and prestige factors seem capahle of justifying little more than a token merchant fleet, then the raison d'etre for the *substantial* U.S.-flag merchant marine that has been the elnsive goal of so many public and private elements of our society for decades mnst be national defense. The realization of this fact is important in that it is frequently, if not generally, submerged in the semantics of the Merchant Marine Act of 1936 as interpreted by various Government and industry interests. The statement that:

> It is necessary for the national defense and development of its foreign and domestic commerce that the United States should have a merchant marine (a) sufficient to carry its domestic waterhorne commerce and a substantial portion of the waterborne export and import foreign commerce of the United States, and to provide shipping service on all routes essential for maintaining the flow of such domestic and foreign waterborne commerce at all time, (b) capable of serving as a naval and military auxiliary in time of war or national emergency . . . [13]

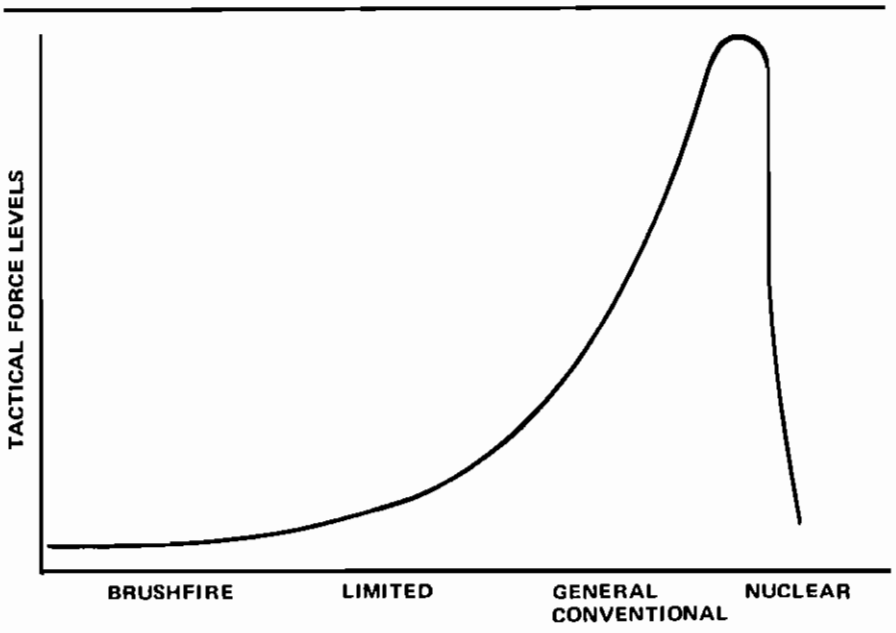
is never fnrther defined as to specifics, thereby engendering endless discussion as to what "substantial" represents. Figures of from 30 percent to 50 percent of the total waterhorne tonnage are widely quoted, even by Government bodies, as being jnstified on the basis of the act.[14] This results in a form of circular reasoning in which the act becomes the tonchstone against which the status of the U.S. merchant marine is measured as well as being the authority for the dispensing of Federal assistance. Thus, the hard reality of national defense requirements, which are in a constant state of flux due to the unsettled nature of the cold war world, becomes submerged in arbitrary percentages of waterborne commerce based upon the interpretations of various special interest gronps. Unfortnnately, national defense requirements cannot he keyed to the fluctuations in U.S. participation in world commerce any more than they can to the vagaries of the New York Stock Exchange.

A merchant fleet fully justified on the hasis of national defense might or might not carry a "substantial" portion of our waterborne commerce in a given year; whether it does or not is immaterial so long as it is capahle of supporting U.S. military comnitments worldwide. The fact that the U.S.-flag merchant marine carried a smaller percentage of our commerce in 1967 than in the years immediately preceding has not been due to any precipitous decline in its capabilities but rather to the fact that such a large portion of the fleet was engaged in Vietnam service. Deficiencies have, however, been uncovered during the course of these operations which show that our merchant fleet is marginal in capahility and that the outlook for the immediate future is far from promising.

## II--MILITARY REQUIREMENTS FOR U.S.FLAG MERCHANT SHIPPING

If the size and composition of the U.S. merchant marine is to he determined by military requirements, then it remains to delineate what these requirements might be. A most interesting product of the nuclear age in warfare has been the fact that projected demands for the deployment of tactical forces do not increase as the intensity of conflict increases from initial contact to total war, rather a truncated curve is indicated as depicted in chart 1. Once the stage of nuclear war is reached, it is assumed that the actnal fighting will be accomplished by strategic forces; and the entire conflict would be of short duration. This would obviate the need for deployment of tactical forces and the transportation effort required to deploy them. This leaves the lesser contingencies of brushfire war, limited war, and general conventional war as

CHART I--SCALE OF WARFARE




legitimate areas of concern for the transport of tactical forces and, therefore, as requirements for the maintenance of a merchant fleet.

The brushfire war, as considered here, also includes small-scale armed interventions such as the Congo and Dominican Republic situations. It is the type of war that is fought with the theater contingency forces on hand and without the requirement for either the redeployment of forces from other theaters or the creation of new formations from the strategic reserve. Such actions, due to their small scale, have in the past generally been served by a combination of military auxiliaries, MSTS vessels, and U.S.-flag merchant ships normally employed on trade routes to the affected areas. The only extraordinary action taken during recent situations of this sort was the commandeering of two U.S.-flag cargo liners in the Mediterranean during the Lebanon crisis.[1] This is an example of a merchant fleet serving its intended national defense purpose, but it would be well to note that in this case two ships were not enough, and the charter of additional foreign-flag vessels was required.[2] Thus, although the numbers of U.S.-flag merchant ships have been more than adequate to serve in brushfire or intervention situations, their disposition has not always been satisfactory.

A conventional general war is perhaps the least likely contingency the United States will have to face in the foreseeable future. Since the only nations capable of engaging the United States in a general war are also nuclear power, the pressures for the side that finds itself at a disadvantage to escalate the conflict into a nuclear war are evident. It appears that only the most unlikely combination of circumstances would permit such a conflict to remain at the nonnuclear level long enough to permit the mobilization and deployment of massive tactical forces.

Nonetheless, a conventional war along World War II lines is possible. As such, it would most probably be a war of reserves in which the expansion

capacity of the shipbuilding and ship operating industries would be crucial to sealift requirements. The United States would certainly start such a conflict in much better condition than in World War II. The great capacity of existing U.S. and Western World shipyards, augmented by such technological advances as the Arendale technique which produces a 70,000-ton tanker in as little as 75 days under peacetime conditions,[3] presents an expansion capability undreamed of 20 years ago. Similarly, the size of the Maritime Commission reserve fleet (despite its advanced age), plus the modern PanLibHon fleet of American-owned vessels for which emergency repatriation procedures exist in the event of national emergency or declared war, and the vast NATO merchant fleets all represent assets that were not available to the same extent at the start of the last war. The extensive use of "third world" nationals, i.e., Indians, Latin Americans, and Indonesians on much of the PanLibHon and some of the NATO fleets, however, casts some doubt as to the immediate retrievability of many of these vessels upon the outbreak of hostilities. The important factor to consider here is that, by its very nature, a general war would involve the major alliances, not just single powers. The United States, therefore, would have access to the capacities and capabilities of the shipping industries of the entire Western World as well as her own and would, in war, have the legal powers to make maximum use thereof.

It is in the support of a limited war of the Korea or Vietnam variety that the United States finds herself in the greatest difficulty as regards shipping capacity. For here is the situation presented in the introduction to this paper: a war in which a substantial expeditionary force must be transported over long distances and maintained over an extended time frame within the following constraints:

1. The United States will not be able to depend upon either allied or PanLibHon shipping for cargoes going to the war zone.

2. There will be no declaration of war and perhaps no declaration of national emergency, thereby precluding mobilization or the use of emergency powers.

3. The military sector will have to compete with the civilian sector for the use of U.S.-flag merchant shipping.

4. Initial requirements will be of an emergency nature requiring ships in being rather than a mobilization base. Reduced to a single statement, the foregoing situation demands that the United States "Go it alone with what is on hand while maintaining a business as usual posture in its civilian economy." This is the order which demands a "substantial" merchant marine in being, not the arbitrary interpretation of a 30-year old act of Congress.

The experiences of both Korea and Vietnam have shown serious deficiencies in the U.S. merchant marine, with the recent Vietnam experience being the most egregious due to its longer time frame, larger force requirements, the absence of maritime allies, and the more advanced age of the merchant fleet called upon to provide sealift. Since conflicts of this nature seem to be in vogue and are likely to remain so for an extended period, logic dictates that we take heed of past lessons in order to avoid this repetition in future conflicts. These lessons have been:

**Lesson 1:** Limited wars have demanded the delivery of fully equipped field units with almost all their sophisticated equipment to areas possessing only the most unsophisticated port facilities.

**Solution:** Shipping must be self-unloading up to the heaviest single lifts in a field army, must be maintainable away from major repair facilities, and must be of shallowest possible draft consistent with their design.

**Lesson 2:** The highest probability for limited war involvement is in the underdeveloped world where shipping densities are light.

**Solution:** Vital shipping routes should be reallocated on the basis of national defense projections to ensure the local availability of U.S.-flag shipping for emergency requirements.

**Lesson 3:** Peak shipping demands will be in the early stages of the conflict due to the delivery of the expeditionary force and the delays inherent in organizing the ports at both ends of the pipeline for greatly increased demands.

**Solution:** An adequate merchant fleet to handle first lift requirements must be in existence, and authority must exist for its immediate retrieval by military authorities. Peaks must be met by a well-maintained, easily restorable reserve fleet and a rapid reaction construction capability.

**Lesson 4:** The POL requirements of modern military forces are steadily increasing and are totally a sealift requirement.

**Solution:** A U.S.-tanker fleet is required with a large total capacity but comprised of vessels small enough to operate into unsophisticated ports and shallow waters.

To these lessons from the past must be added a new dimension, that of possible submarine warfare by previously nonmaritime nations. The acquisition of submarines by such powers as Red China and Egypt renders their use possible in future limited wars. Although the threat would most likely be from conventional submarines, the effect against the 11- to 16-knot relics of the reserve fleet and much of the active merchant marine could be catastrophic in the short run. Although such limited undersea forces as are possessed by these powers would not have extensive staying power, one cannot rule out significant augmentation from the large inventory of obsolescent Soviet conventional submarines available for transfer.

When all the foregoing factors are combined, a pattern for a militarily effective U.S. merchant marine emerges that is at variance with purely commercial considerations.

A commercially oriented merchant marine would have a small and declining passenger and passenger/cargo ship inventory in line with the decreasing market for such services. Its fleet of cargo liners would be comprised of modern, highly automated, but conventional, ships of high capacity and moderate speed. A large number of containerships and a small number of roll-on/roll-off ships would round out the liner fleet. Both the tanker and bulk carrier fleets would contain the largest vessels procurable, with low cost capacity being of more importance than speed or the ability to service shallow draft ports. This commercial fleet would ply those routes that provide the greatest economic return with the best vessels servicing the most lucrative ports.

The military-oriented merchant marine, on the other hand, would require the maintenance of a small fleet of extremely high-speed passenger ships to be kept in service until that distant day when airlift will assuredly be able to handle *all* contingencies. Cargo liners would be ultrafast, highly automated, and with self-servicing heavy-lift gear. Roll-on/roll-off ships would comprise a significant portion of the fleet, enough of them to establish a bridge across the longest reaches of the Pacific Ocean. Containerships would be subordinate to both general cargo liners and roll-on/roll-off ships and would only be required for backup supplies after the major deployments. Although bulk carriers would not be required, a large fleet of fast but small tankers would be needed to meet the disparate requirements of great quantity yet limited port facilities. Thus, a reversion to a series of super T-2-type tankers would be required at 20,000 tons to 30,000 tons rather than the 100,000- 200,000- and

300,000-ton behemoths that are built for commercial purposes today. For those vessels which private enterprise would be found unwilling to procure and/or operate, Government services would be required. Finally, trade routes would be allocated on the basis of areas where U.S. commercial presence is required, even if not particularly profitable, and where military requirements might become necessary.

## III--CAPABILITIES OF THE U.S. MERCHANT MARINE

Despite its impressive size in both numbers of vessels and total capacity, the U.S. merchant fleet is far from impressive either in current capabilities or future prospects. To quote House Minority Leader Gerald Ford (R), Michigan, two-thirds of the U.S. merchant fleet is " . . . obsolete, inefficient, and noncompetitive."[1] Table II depicts this situation. The active U.S. merchant marine is now the world's sixth largest in numbers and fifth in capacity.[2] This position remains constant whether or not one adds the active Government-owned portion of the fleet. Equally important, it is by far the oldest fleet of any of the six major maritime nations.[3] Included in this aging fleet are some of the newest, fastest, and most technologically advanced merchant ships in the world, but not in sufficient numbers to improve materially the situation. On balance, the U.S.-flag merchant marine has been found wanting when measured against the yardstick of current U.S. military requirements in Vietnam and, from all indications, it will be even less capable if called upon again. This is in stark contrast to the pre-Vietnam situation when the Secretary of Commerce could state that " . . . The existing ships under the American flag are adequate to meet presently established requirements for service by the military.[4]

Today, U.S.-flag ships not only are carrying a mere 6.6 percent of all U.S. oceangoing commerce,[5] but they have been unable to support the demands of the military services, and an infusion of foreign-flag carriers has been necessary to keep vital supply lines flowing.

Given the assumption that our Vietnam experience is representative of the limited wars that pose the most probable threat to our national security in the immediate future, it would be rewarding to see what the shortfall in U.S.-flag merchant shipping has been. Keeping in mind that the Cargo Preference Act of 1904 provides that all military cargoes must be carried in American bottoms, unless such are not reasonably available, any use of foreign shipping in this area represents either the absence of U.S. capability or the unwillingness of U.S. operators to divert assets to military traffic.

The forced relocation of U.S. forces from France, subsequent to De Gaulle's withdrawal from military participation in NATO, required the movement of vast stocks of war materiel from French to British depots. Termed Operation

TABLE II--STATUS OF THE U.S. MERCHANT FLEET[a]

| | Vessels | Tonnage (Millions) | Age |
|---|---|---|---|
| Total U.S. merchant fleet | 2,115 | 25.5 | 22 |
| less reserve fleet | (969) | (8.5) | 24 |
| Active U.S. merchant fleet | 1,146 | 17.0 | 19 |
| less Govt.-owned vessels | (155) | (1.6) | 25 |
| Privately owned active merchant fleet | 991 | 15.4 | 18.5 |

[a]"Inventory of U.S. Flag Merchant Ships," *Merchant Ship Register*, July 1968, p. 1.

**TABLE III--MSTS CHARTER OF FOREIGN VESSELS[a]**
**(all tonnages in thousands)**

| Fiscal Year | Dry Cargo | Percent of Lift | Tankers | Percent of Lift | Total |
|---|---|---|---|---|---|
| 1964 | 81.7 | 3.6 | 235.7 | 2.4 | 317.4 |
| 1965 | 201.8 | 8.3 | 154.1 | 1.5 | 355.9 |
| 1966 | 341.7 | 5.3 | 168.0 | 1.3 | 509.7 |
| 1967 | 455.5* | 5.6 | 1,762.6 | 10.8 | 2,208.1 |

*Includes relocation of U.S. forces from France (FRELOC)

[a]U.S. Congress, House, Committee on Merchant Marine and Fisheries, *Prohibitions against Foreign Build Vessels,* Hearings (Washington: U.S. Govt. Print. Off., 1968), p. 28.

FRELOC, this positioning of thousands of tons of supplies during fiscal year 1967 required more shipping than the already strained American merchant marine could possibly provide. As a result, 30 of a total of 46 foreign-flag, dry cargo ships chartered that year served in European rather than Southeast Asian waters. Had it not been for this unique operation, there would have been a marked reduction in the amount of foreign-flag shipping under charter to MSTS which would have substantially reduced the figures for 1967, possibly to a point below those for 1966.

The chart shows that the 455,500 tons of chartered dry cargo lift carried only 5.6 percent of the total MSTS lift in 1967. Therefore, 94.4 percent was carried by other means, either by U.S.-flag ships or by ships of foreign registry; and there is no known compilation of the percentage split of this, by far, larger amount. It is, however, believed that the major portion was in ships of U.S. registry. As for tankers, the situation is more clear: 1,762,600 chartered tons lifted 10.8 percent of NSTS petroleum products; if the entire U.S.-tanker fleet were employed similarly, it could have lifted only another 43.2 percent. Thus, a minimum of 46 percent of vital POL supply for Vietnam must have been transported in foreign-flag shipping.

Although the dry cargo situation was brought under control after the initial surge of the 1965-66 Vietnam buildup, this was accomplished only through the breakout of vessels from the reserve fleet. Tankers, however, present another and more serious aspect of the problem. Although in the early stages of the Vietnam war most fuel was delivered by contractors with established operations in the area, the increased tempo of combat operations, plus the worldwide effect of the closing of the Suez Canal, produced a surge in tanker requirements that could only be met through direct charters by MSTS. Since the U.S.-tanker fleet is a distant fifth in world tonnage--7 million d.w.t. vs. Liberia's 26 million d.w.t., Norway's 16.5 million d.w.t., Britain's 14.5 million d.w.t., and Japan's 11.3 million d.w.t.[6]--with a virtually nonexistent reserve, foreign charters became essential. The sad state of the American tanker fleet is depicted in table IV. At present time there are 16 tankers under construction in U.S. yards, of which 12 are of the under 40,000-ton militarily usable variety, and 4 are 80,000-ton deep-draft ships.[7] Although a welcome addition to the U.S. fleet, these few new ships do not go very far toward redressing the balance of the extremely old vessels forming the bulk of the inventory. The reserve fleet, as can be seen from its diminutive size and advanced age, adds little. There are 267 tankers in the PanLibHon fleet

TABLE IV--U.S. TANKER FLEET[a]

| Ownership | Total | Age Under 5 yrs. | 6-19 yrs. | 20 yrs.+ |
|---|---|---|---|---|
| Private | 294 | 11 | 117 | 166 |
| Govt. (incl. reserve) | 32 | 0 | 0 | 32 |

[a]"III--Tankers," *Merchant Ship Register*, July 1968, p. i-ii.

TABLE V--U.S. FLAG DRY CARGO LINER FLEET[a]

| Ownership | Total | Age Under 5 yrs. | 6-19 yrs. | 20 yrs.+ |
|---|---|---|---|---|
| Private | 670 | 64 | 95 | 511 |
| Govt. (active) | 154 | 0 | 2 | 152 |
| Govt. (reserve) | 628 | 0 | 0 | 628 |

[a]"I--Dry Cargo," *Merchant Ship Register*, July 1968, p. 1-11.

under U.S. ownership.[8] However, these cannot be counted upon under limited war circumstances as existing retrieval agreements do not cover situations where an official emergency does not exist; and, in any event, the availability and reliability of their foreign national crews are open to question. The U.S.-flag tanker fleet therefore, has already failed the test of limited war and is rapidly fading into the mists of obsolescence.

In contrast to the tanker situation, the U.S.-flag dry cargo liner fleet is extensively subsidized and, to a great extent, has performed well in limited war. The existence of a large reserve fleet of cargo liners has precluded extensive foreign-flag charters by the Government. Many of the 172 ships that were reactivated have, however, been used for the last time. The aging reserve fleet is rapidly losing its value.[9]

The dry cargo liner fleet exists in two widely disparate forms, that of the subsidized operators and that of the unsubsidized operators. Fifteen shipping firms operating 314 ships (including 26 passenger and passenger/cargo combination vessels) share operating subsidies of $200 million per year and construction subsidies of over $100 million per year.[10] For this they provide sailings on specified schedules over 30 essential trade routes. The extent of the subsidy payments cover 72 percent of their crew wages and 55 percent of new ship construction.[11] The unsubsidized operators operating the remainder of the fleets pay all of their own costs. They have been able to survive only through the concealed subsidy of special rates paid for Government cargoes and by simply not replacing their aging ships.

The military problem with the dry cargo liner fleet is not its size but its age and composition. Being mostly war built, its large number of slow (under 16 knots) vessels creates long transit times and increases the submarine hazard; its age creates excessive maintenance problems; and its lack of heavy-lift cargo gear requires extensive shore facilities. An additional problem is that the more modern ships in the fleet are concentrated on the most commercially desirable trade routes where they are not immediately available for diversion to prospective trouble spots in the underdeveloped world.

No technological breakthrough is

required to design the proper type of dry cargo liners to support our military effort; for such ships do exist, although in small numbers. Some examples are:

The C-5 series general cargo ships such as the five currently under subsidized construction for the American Mail Line. These are 22,000 d.w.t. vessels capable of 21 knots, and with 70-ton capacity booms they are capable of handling virtually all cargo with integral ship's rigging.[12]

The new roll-on/roll-off ship, MV *Admiral Callaghan*, now under long-term charter to MSTS, is the world's fastest, most flexible cargo liner. Powered by two gas turbine engines in lieu of conventional boilers, the *Callaghan* is capable of over 25 knots with a load of 750 vehicles or 14,000 tons of cargo. As a roll-on/roll-off ship she can off-load and reload a full cargo of vehicles through four side ports and a stern ramp in just 27 hours and be ready for sailing; for general cargo she has a heavy-lift capability of 240 tons with integral rigging.[13] After 1 full year of operation, the *Callaghan* has logged 1.2 billion ton-miles, a figure equal to 20 percent of the entire effort of the Military Airlift Command over the same period.[14] An additional benefit that has accrued from the Government's sponsorship of the *Callaghan* is the SS *Ponce de Leon*. A sister ship to the *Callaghan*, except for the absence of the heavy-lift rigging and the substitution of conventional steam power for the more exotic gas turbines, the *Ponce de Leon* was contracted for by private interests at the same shipyard. This enabled the shipyard to gain the cost advantage of multiple construction while providing an additional major ship to the American-flag fleet.[15] Government sponsorship of other prototype ships could further induce private operators to profit from the reduced costs of series construction.

An example of using reserve fleet assets to their fullest extent was the recent conversion of two World War II P-5 troopships into heavy-lift ships with 240-ton capacity booms.[16] There are 170 such troopships in the reserve fleet, many of which had but a few months' use since their completion over 20 years ago. The possibility of their conversion to meet emergency requirements, such as our need for heavy-lift ships, (only two existed in the entire merchant service prior to the two added here and the *Callaghan)* is one that should be further exploited in the future.

There are 38 modern dry cargo liners under construction in American shipyards today, all of which have significant military value.[17] The problem is that these are not enough. Faced with a similar situation during the Korean war, the Government built 35 of the new *Mariner* class cargo ships to its own account. Although commercial operators considered them to be "too big," "too fast," and "uneconomic," they were soon absorbed into the merchant fleet and served as prototypes for cargo liner construction by private firms for the next decade.[18] Although the precedent does exist for Government construction of ships that private firms are unwilling to provide, MSTS is today following the approach of offering long-term charter arrangements to those companies that will contruct ships to their own account to MSTS specifications. This arrangement produced the *Callaghan* and is being offered for the construction of new tankers.[19] How effective it will be remains to be seen.

Dry bulk carriers, such as ore ships and colliers, comprise a growing 18 percent of the world's merchant tonnage and a declining 10 percent of U.S.-flag tonnage.[20] Although this area also presents a dreary commercial picture for American-flag operators, there is little, if any, direct military applicability for this segment of the fleet. Therefore it will not be considered in this paper with the caveat that in the

event of general nonnuclear war the importation of certain critical minerals could present a problem. Continuing with the assumption, however, that any general war would be a war of alliances, the dry bulk fleets of the Western European powers are large enough to handle this situation.

Just prior to the Vietnam buildup, it was assumed that there was no longer any valid requirement for U.S. troopships; and indeed plans were made for the inactivation of the MSTS troopship fleet. Vietnam proved otherwise, and the vast majority of American forces deployed by sea. The reason was obvious; except for some light mobile units that are totally air transportable, most military formations require sealift for their equipment; and therefore their manpower can only be effectively moved at the same rate. Although the U.S.-flag passenger fleet was not required to augment the MSTS troopships, such an eventuality cannot be ruled out. Only three of the MSTS vessels are of post-World War II vintage,[21] and the only source of modern fast vessels lies with the privately owned fleet. Several of these have exceptional capabilities, such as the 40-knot speed of the *United States*.[22] Although advances in airlift, coupled with extensive prepositioning of military equipment in forward locations, may some day obviate the need for troop sealift, that day is not yet here; and the preservation of the existing capabilities is essential.

When all factors are taken into consideration, it becomes apparent that the U.S. merchant marine is already deficient in tankers, rapidly slipping in dry cargo liner capability, and holding even in troopships. Current measures are not adequate to keep the fleet militarily effective, and in the event of another limited war the United States could find itself in a shipping crisis if required to "go it alone."

## IV--A PROPOSAL FOR RECONSTRUCTION

As stated in chapter II, the one valid requirement for a U.S.-flag merchant marine that cannot be met through existing programs is the very real one of limited war. The fleet that has served through one general, two limited, and a number of brushfire wars is worn out; and too little has been done to replace it. The need for an immediate upgrading of this fleet is urgent; but it must be based upon a rational assessment of requirements, not on spasmodic reaction as has too often been the case in the past. To accomplish this within the framework of existing law, the following recommendations are made:

1. The Departments of Commerce and Defense should jointly determine the size and composition of the U.S. merchant fleet required to support U.S. forces in foreseeable limited war contingencies.

2. A construction program be jointly presented to Congress, realistically phased, to attain the number of effective ships envisioned in the shortest period of time. The block obsolescence of the war-built fleet dictates that the initial phases of the new construction program be quite large; and, indeed, it might be greater than the existing subsidized lines can absorb. In any event, participation on a subsidized basis would be offered to currently unsubsidized carriers for the tanker requirements and any portion of the dry cargo liner segment that they can support. That portion of the program that cannot be accepted by private U.S. operators would be built to the Government's account to be operated by MSTS or placed in reserve.

3. To the greatest extent possible, MSTS will offer long-term charters to the owners of the most critical portion of the fleet. This would provide an immediately available source of vessels for deployment in the event of emer-

gency requirements and, in the meantime, would provide the military with service by the most modern portion of the fleet.

4. The remainder of the privately operated fleet would be placed under a variable-incentive subsidy in which those carriers servicing potential trouble spots would be paid larger subsidies than those on the more placid and profitable routes. This would ensure the availability of additional lift in areas where U.S. forces would be most likely to deploy.

5. The reserve fleet would be composed of only those vessels for which a realistic requirement exists and which can be readily deprocessed. As older ships are scrapped and the first of the postwar fleets begin to pass into the reserve, the overall age disposition of this fleet should improve. Eventually it should be comprised of usable second-line ships rather than the obsolete scrap ships of today.

The key to this situation is for the Commerce Department to realize that national defense is *the* reason for the existence of the U.S. merchant fleet; for the Defense Department to realize that it must depend on commercial shipping for its major logistic requirements; and for Congress to realize that the need is immediate and that money must be provided for merchant ships just as for any other valid military requirement.

It is understood that there will be dislocation within the industry. There will no longer be subsidized and unsubsidized carriers, rather there will be a single category of carriers with a mixture of subsidized and unsubsidized ships.

This will require a new outlook by the Maritime Administration which is used to the simpler divisions of the industry that exist today. In essence, it will no longer concern the Government whether a carrier be common or industrial, berth, or tramp. If the carrier is willing to purchase and operate, under the American flag, a ship that meets military support requirements, he will be entitled to a Government charter, tender of Government cargoes, or a subsidy to assist in commercial operations. If the ship provides service on a regular basis in a designated "hot-spot" area, the operator will be entitled to an additional subsidy for, in effect, being a military auxiliary. Once the ship can no longer be classified as a first-line merchant ship, the operator will then be permitted to either sell it to the Government for placement in the reserve or to continue to operate it as an unsubsidized ship for which the Government assumes no obligation.

That this plan, in effect, formalizes the status of the U.S.-flag merchant marine as a quasi-military auxiliary is accepted. For just as the Merchant Marine Act of 1936 took most subsidies from under the table and placed them in the open, this application of the act would ensure that the subsidies paid are actually purchasing an effective capability for the national defense. If the industry is unable to survive without assistance, and we have a century of evidence to that fact, then it must accept the national obligations that are entailed in the acceptance of Federal

## BIOGRAPHIC SUMMARY

Maj. Robert E. McCleave, Jr., U.S. Army, did his undergraduate work at the University of Pennsylvania and holds a master's degree in transportation from the University of Tennessee. He has had wide and extensive experience in transportation in the U.S. Army. His most recent experience has been as the Division Transportation Officer for the 25th Infantry Division in Vietnam (1966-67) and as a Branch Chief of the U.S. Army Transportation School at Fort Eustis, Va. (1967-78). Major McCleave is currently a student at the Naval War College, School of Naval Command and Staff.

aid. For the United States this will mean the availability of a viable and effective fleet of merchant shipping capable of serving as the "Fourth Arm of Defense" while contributing to the international prestige of the Nation and someday, perhaps, when fully modernized, making a substantial economic contribution.

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To the spread of our trade in peace and the defense of our flag a great and prosperous merchant marine is indispensable.

*Theodore Roosevelt: To Congress, 7 December 1903*

# SOVIET AID AND TRADE AND ITS THREAT TO THE FREE WORLD

An article by

Professor Philip L. Gamble

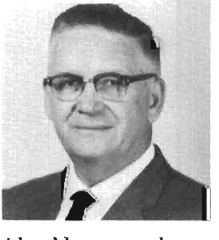
Chair of Economics

*In recent years the U.S.S.R. has circumvented the West's containment policy through the use of economic, technical, and military aid programs support by a viable and growing merchant fleet and navy. The breakout is supported by basic Communist philosophical beliefs, and the national pride of a great power in competition with other nations. This Soviet effort forces the United States to modernize both its merchant marine and naval fleet in order to ensure continued unrestricted use of the high seas.*

One manifestation of the growth in the economic power of the U.S.S.R. is the expansion of her aid and trade programs. These, in turn, have led to and been accompanied by expansion of her merchant marine, her navy, and her search for foreign bases and friendly ports. Accompanying this growth of aid, trade, and maritime power has been an increased threat to the United States and Europe of nuclear missile launches from submarines or sites closer than the landmass of the U.S.S.R.

Soviet and other Communist-world aid to developing nations really dates from the death of Stalin in 1953. The causes for this about-face in Soviet attitude towards aid programs are probably mixed, but certainly include the observation of the successes of American aid in the Marshall Plan; the uprisings in the satellite countries of Po-

## BIOGRAPHIC SUMMARY



Professor Philip L. Gamble did his undergraduate work at Wesleyan College, holds a master's degree in economics from Wesleyan, and gained a Ph.D. in the field from Cornell University. He has done considerable research work and writing in the field of taxation, has served as Acting Department Head and Dean at the University of Massachusetts in the Department of Business Administration and School of Business Administration, respectively, and holds a professorship at this institution. In the years 1964-65 he served as a Fulbright Lecturer at Tunghai University, Taiwan, Republic of China. Professor Gamble is currently occupying the Chair of Economics at the Naval War College.

land, Hungary, and East Germany; the overcapacity of its heavy industry and the need for raw materials; the need for sophisticated machinery; the desire to break out of the containment ring; and the desire to spread communism and counter European and American domination of "Third World" markets. In the sixties some Soviet aid was extended to counter aid given by its former close ally, Communist China.

Turning to the problem of Soviet aid, we must recognize that aid programs are of several types. They may be economic, military, or technical. Each of these may be provided in the form of outright grants or in the form of "soft" or "hard" loans. Technical aid may be given by either sending representatives to the recipient countries or by training representatives from these recipient countries in the schools of the donor nation.

The economic value of foreign aid programs lies in the transfer of goods and services from one country to another. This increase in goods and services permits the recipient country to exercise more economic options that it could otherwise do. It makes no difference if the new resources are in the form of civilian goods, military goods, or technical aid; for the addition to the recipient country's net available resources permits additional economic programs or transfers of resources to other programs.

Foreign aid programs permit a less-developed country to import more goods and services than it could otherwise, until the repayments of interest and capital exceed the earnings from exports and new loans and aid extensions. For most developing nations, continuing large aid programs are vital. They must continue to expand their investment because of the need to repay previous loans. Moreover, some citizens of developing countries prefer to keep some of their earnings abroad in investments or bank accounts in the developed countries because of a greater yield, greater safety, or some combination of these. Foreign exchange from aid is also needed to pay for transportation, insurance, and the cost of diplomatic missions and foreign experts and teachers.

It is easier to measure the net increase in resources provided to a developing country than to determine the influence the aid program has had on its economic development. Basically, the aid increases the recipient's policy flexibility over a wide range of choices, both external and internal. The ultimate effect depends on the soundness of the choices made. These choices also determine whether the aid programs serve all or some of the donors' interests and how effectively these interests are actually served.

Fundamentally the foreign policy of sovereign states is guided by their own national interests as they see them. Isolated acts of substantial generosity or symbolic steps by a government to satisfy the conscience of its own citizenry and its appeal to world recognition of its own moral stature may occur. Nevertheless, the normal contribution of significant sums that are the earmark of any successful foreign aid program is unlikely unless the national interest of the donor is clearly served, widely understood, and supported.

In view of the above, it is important to trace the pattern of Soviet and Communist bloc aid to see the aim and direction of its thrust. Clearly, the main thrust in recent years has been towards countries near the borders of the Soviet Union and in regions where it would like to have access. Aid to Pakistan, India, and the Middle East, especially the United Arab Republic, has dominated the program of the Soviet Union. Lesser amounts have been given where they might undermine the influence of the Western Powers, but they are small in amount and not consistently provided.

It is important to recognize that the history of Soviet position with respect to aid is roughly divided into two periods: from 1917 to 1953 and the death of Stalin, and from 1954 to the present. During the first period, the Soviets were almost exclusively the recipients of aid, much of it coming from the United States and much of the balance, by various devices, from sister Communist states. In the second period, the Soviets first granted large amounts of aid to their satellite nations and to Communist China and then were joined by the other Communist states as purveyors of aid to the nations of the free world.

**Soviet Aid 1917-1953.** From 1917 to 1953 the Soviet Union asked for or demanded economic and military aid rather than dispensing it. Through reparations, joint-stock companies, and trade agreements, it managed to channel large amounts of economic goods into its own national income stream. From the United States alone it is estimated that over $12 billion was received plus technical aid given as training to Soviet engineers and provided by American representatives. Eleven billion dollars of this total represented lend-lease assistance at the time of World War II. Table I summarizes the aid to the U.S.S.R. and European Communist countries by the United States during this historical period.

Additional aid to the Soviet Union provided by Communist and other nations is impossible to quantify precisely but was very extensive. For example, by late 1951 the Soviet Union admitted to taking $3,659 million at prewar prices from Germany alone. In addition, East and West Germany were forced to bear the cost of maintenance of Russian troops. One estimate of Russian collections from China totaled $900 million. Large reparations were also collected from Poland, Bulgaria, Czechoslovakia, and Rumania.

Joint-stock companies with various partners of the Soviet Union served as effective instruments of penetration. By imposing them on both friendly and hostile countries, the Russians were able to obtain a steady source of income and

**TABLE I--AID TO EUROPEAN COMMUNIST COUNTRIES[a]**
**1 July 1945 through 30 June 1962**

| | UNRRA Supplies | U.S. Military Aid Supplies and Services | U.S. Economic and Technical Assistance | Total |
|---|---|---|---|---|
| | | (millions of U.S. dollars) | | |
| Albania | 26 | ------ | 20 | 46 |
| Czechoslovakia | 261 | ------ | 191 | 452 |
| East Germany | ------ | ------ | 17 | 17 |
| Hungary | 4 | ------ | 26 | 30 |
| Poland | 478 | ------ | 878 | 1,356 |
| U.S.S.R.[b] | 259 | ------ | 409 | 668 |
| Yugoslavia | 416 | 719 | 1,585 | 2,720 |
| Total | 1,444 | 719 | 3,126 | 5,289 |

[a]Milorad M. Drachkovitch, *United States Aid to Yugoslavia and Poland* (Washington: American Enterprise Institute, 1963), p. 121.

[b]The Soviet Union received, in addition to the assistance itemized above, supplies and equipment during World War II under lend-lease from the United States at nearly $11 billion.

to secure priority shipments of goods, including uranium and nonferous materials, to the U.S.S.R. at a time of severe international shortages. Finally, hy the joint-stock company device the U.S.S.R. managed to control the airlines of almost all the countries of Eastern Europe, Mongolia, and China as well as river transportation on the Danuhe.

By setting the terms of trade with its satellites, the U.S.S.R. was able to get additional economic advantages. Iligh prices for Russian goods and low prices for satellite goods provided a steady net gain to Russia. Only after the Polish revolt of 1957 was the price paid for Polish coal raised from the prewar price of $1.50 per ton to $6.50 per ton and $600 million in claims against Poland and canceled.

**Soviet Aid 1954--Present.**

**Economie Aid.** Turning to the sceond period of Soviet aid history, beginning in 1954 after the death of Stalin and continuing to the present, Table II showing Communist economic aid, compiled by the Bureau of Intelligenee and Researeh of the U.S. State Department, has informative signifieanee. Data for all Communist nations is inelnded because the aid from satellite nations is Soviet inspired. In the case of China it is competitive, though clearly for different reasons.

Of the total Communist nation ceonomic aid grants for the period 1954-1967 ($8,981 million), $6,155 million has gone to the Near East and South Asia. The largest amounts within this area went to India with $1,948 million and the U.A.R. with $1,679 million. These two aecount for more than two-thirds of the total to the area and more than one-third of the overall total aid given. Africa, with a total of $1,451 million, of which $304 million was to Algeria and $231 million was to Ghana, follows, and the Far East and Latin Ameriea are next with $944 million and $431 million, respectively. In the Far East, Indonesia was the major recipient with $740 million; and in Latin America, Brazil received $312 million.

The year 1967 showed a great tapering off of aid from Communist countries with a total of only $192 million as compared with the total for 1966 of $1,503 million. The greatest drop oecurred in the aid to the Near East and South Asia, with the largest decline being in the grants to India, Iran, Pakistan, and Syria.

It is not possible to determine the reasons for the mueh lower commitments in 1967, which were lower than in any year since 1955, hut they may he due to the large backlog of unexpended credit still available to the less-developed countries, or to the lack of opportunities for new aid extensions after 3 years of record-high new aid extensions in 1964-1966, and to the reluetance of some developing countries to aeeept new aid offers made during the year. This reluetanee may stem in part from the realization that the repayment for aid already reeeived is straining the capaeities of the recipients to pay. Communist terms appear favorable when first viewed beeause of the low interest rates charged relative to those of the United States, but the repayment terms compel trade exports almost at once of large amounts to repay the total in 12 or 13 years, while the U.S. terms, with their long grace periods of up to 8 years and loans of 40-year duration, do not. The result is some disenchantment with Communist loans because they do not give enough time for the investment to beeome productive and for returns on the investment to be realized.

While Communist aid commitments through the end of 1967 amount to slightly less than $9 billion, a wide gap remains between commitments and aetual aid disbursements. Only about 40 percent of Communist aid has been implemented. The gap of ahout $6 hillion was narrowed in 1967 beeause

TABLE II--COMMUNIST ECONOMIC CREDITS AND GRANTS EXTENDED TO LESS DEVELOPED COUNTRIES 1954-1967 AND YEARS 1966 AND 1967[a] (Million Current U.S. $)

| | 1954-1967 | | | | 1966 | | | | 1967 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TOTAL | USSR | EASTERN EUROPE | COM CHINA | TOTAL | USSR | EASTERN EUROPE | COM CHINA | TOTAL | USSR | EASTERN EUROPE | COM CHINA |
| TOTAL | 8,981 | 5,989 | 2,099 | 893 | 1,503 | 1,244 | 228 | 31 | 192 | 69 | 74 | 49 |
| AFRICA | 1,451 | 858 | 297 | 296 | 88 | 77 | 0 | 11 | 47 | 9 | 17 | 21 |
| ALGERIA | 304 | 232 | 22 | 50 | 1 | 1 | -- | -- | -- | -- | -- | -- |
| CAMEROON | 8 | 8 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| CENTRAL AFRICAN REPUBLIC | 4 | -- | -- | 4 | -- | -- | -- | -- | -- | -- | -- | -- |
| CONGO (B) | 34 | 9 | -- | 25 | -- | -- | -- | -- | -- | -- | -- | -- |
| ETHIOPIA | 119 | 102 | 17 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| GHANA | 231 | 89 | 102 | 40 | -- | -- | -- | -- | -- | -- | -- | -- |
| GUINEA | 123 | 73 | 25 | 25 | 3 | 3 | -- | -- | -- | -- | -- | -- |
| KENYA | 62 | 44 | -- | 18 | -- | -- | -- | -- | -- | -- | -- | -- |
| MALI | 101 | 55 | 23 | 23 | 3 | -- | -- | 3 | -- | -- | -- | -- |
| MAURITANIA | 7 | 3 | -- | 4 | -- | -- | -- | -- | 7 | 3 | -- | 4 |
| MOROCCO | 79 | 44 | 35 | -- | 44 | 44 | -- | -- | -- | -- | -- | -- |
| NIGERIA | 14 | -- | 14 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SENEGAL | 7 | 7 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SIERRA LEONE | 28 | 28 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SOMALIA | 94 | 66 | 6 | 22 | 9 | 9 | -- | -- | -- | -- | -- | -- |
| SUDAN | 49 | 22 | 27 | -- | -- | -- | -- | -- | 17 | -- | 17 | -- |
| TANZANIA[B] | 79 | 20 | 6 | 53 | 28 | 20 | -- | 8 | -- | -- | -- | -- |
| TUNISIA | 54 | 34 | 20 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| UGANDA | 31 | 16 | -- | 15 | -- | -- | -- | -- | -- | -- | -- | -- |
| ZAMBIA[B] | 23 | 6 | -- | 17 | -- | -- | -- | -- | 23 | 6 | -- | 17 |
| FAR EAST | 944 | 411 | 294 | 239 | 28 | 4 | 24 | 0 | 0 | 0 | 0 | 0 |
| BURMA | 124 | 14 | 26 | 84 | 24 | -- | 24 | -- | -- | -- | -- | -- |
| CAMBODIA | 80 | 25 | 5 | 50 | 4 | 4 | -- | -- | -- | -- | -- | -- |
| INDONESIA | 740 | 372 | 263 | 105 | -- | -- | -- | -- | -- | -- | -- | -- |

TABLE II--continued

| | 1954-1967 | | | | 1966 | | | | 1967 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TOTAL | USSR | EASTERN EUROPE | COM CHINA | TOTAL | USSR | EASTERN EUROPE | COM CHINA | TOTAL | USSR | EASTERN EUROPE | COM CHINA |
| LATIN AMERICA | 431 | 185 | 246 | -- | 128 | 85 | 43 | -- | 70 | 55 | 15 | -- |
| ARGENTINA | 49 | 45 | 4 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| BRAZIL | 312 | 85 | 227 | -- | 128 | 85 | 43 | -- | -- | -- | -- | -- |
| CHILE | 55 | 55 | -- | -- | -- | -- | -- | -- | 55 | 55 | -- | -- |
| ECUADOR | 5 | -- | 5 | -- | -- | -- | -- | -- | 5 | -- | 5 | -- |
| URUGUAY | 10 | -- | 10 | -- | -- | -- | -- | -- | 10 | -- | 10 | -- |
| NEAR EAST AND SOUTH ASIA | 6,155 | 4,535 | 1,262 | 358 | 1,259 | 1,078 | 161 | 20 | 75 | 5 | 42 | 28 |
| AFGHANISTAN | 610 | 570 | 12 | 28 | 6 | 1 | 5 | -- | 5 | 5 | -- | -- |
| CEYLON | 123 | 30 | 52 | 41 | -- | -- | -- | -- | -- | -- | -- | -- |
| GREECE | 84 | 84 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| INDIA | 1,948 | 1,593 | 355 | -- | 639 | 571 | 68 | -- | 10 | -- | 10 | -- |
| IRAN | 386 | 330 | 56 | -- | 289 | 289 | -- | -- | 10 | -- | 10 | -- |
| IRAQ | 184 | 184 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NEPAL | 80 | 20 | -- | 60 | 20 | -- | -- | 20 | -- | -- | -- | -- |
| PAKISTAN | 301 | 178 | 56 | 67 | 112 | 34 | 28 | -- | 7 | -- | -- | 7 |
| SYRIA | 393 | 233 | 144 | 16 | 192 | 133 | 59 | -- | -- | -- | -- | -- |
| TURKEY | 218 | 210 | 8 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| UAR | 1,679 | 1,011 | 562 | 106 | -- | -- | -- | -- | 43 | -- | 22 | 21 |
| YEMEN | 149 | 92 | 17 | 40 | 1 | -- | 1 | -- | -- | -- | -- | -- |

[a]U.S. Dept. of State, Bureau of Intelligence and Research, *Communist Governments and Developing Nations: Aid and Trade in 1967,* Research Memorandum RSE-120 (Washington: 14 August 1968), p. 2.

[b]In 1967 Communist China agreed to assist in constructing the Tan-Zam railroad. The amount of the credit is still undecided.

disbursements remained at about $500 million, while new commitments were less than $200 million.

The slow implementation of Communist economic aid is probably largely due to shortages of technical and management skills by aid recipients, the inability of many of them to provide local currency to finance Communist-aided projects, plus the diversion in several cases of scarce resources into military procurement. To some extent the 1967 slowdown is related to the desire of the Communist donors to speed implementation of old credits and promote fuller utilization of existing plant capacity. This approach is more in keeping with the more pragmatic and businesslike approach to aid policy noted in the past few years.

Drawings on aid are running at about $500 million per year, and this total has remained essentially the same since 1964. The major expenditures are being made in India, the U.A.R. and Afghanistan. Together these three countries account for about 60 percent of total economic drawings to date. Estimated annual drawings of Soviet economic aid reached a peak of about $370 million in 1964, but declined to $300 million in 1966. In spite of heavy deliveries to the U.A.R. primarily for the Aswan Dam project, Soviet aid deliveries in 1967 did not increase and may have even decreased slightly due to the large cutbacks to India resulting from that country's industrial recession. Estimated drawings in 1967 on China and East European aid increased and kept the overall total at the $300 million figure.

The net value of Communist aid is considerably less than the gross disbursement due to repayments in goods and, to a much lesser extent, in convertible currency. Scheduled annual repayments of principal and interest for 1967 are estimated at over $200 million. For the U.S.S.R., because of the growing level of annual repayments and the leveling off of aid deliveries in recent years, the net outflow of goods and services is estimated to have actually declined. From about $60 million in 1960, the net outflow rose to $290 million in 1964 and declined to $125 million in 1967. In addition, there are indications that repayment obligations, some of which are due in goods that might be resalable in Western markets, are increasingly felt by some aid recipients and that a number of them, including Indonesia and the U.A.R., have requested and received various forms of relief from their debt-servicing obligations.

**Military Aid.** In 1967 Communist countries pledged some $480 million in new military aid to developing countries, exceeding the average extensions of $350 million during the preceding 2 years, but remaining far below the record Communist commitment of 1 billion in military aid for 1964. The new commitments for 1967 brought the total of military aid extended from 1955 to $5.5 billion. Table III gives the totals for 1955-1967, cumulative by countries.

The table shows that the U.S.S.R., among the Communist countries, has been and continues to be the major supplier of military aid, accounting for more than 90 percent of the aid pledged in 1967. Most of this aid was given to Near Eastern countries. In January 1967 the Soviets signed a $110 million arms aid agreement with Iran, representing the first military aid given that country. Also in 1968, a series of agreements were signed with Arab states to replace the severe losses of the June war with Israel.

The table also shows that the majority of the Communist arms aid has gone to the Near Eastern countries. Out of a total of $3,800 million to the Near East and South Asia, only $920 million has gone to other than Arab states. Most of the military aid to the Far East went to Indonesia, with only $10 million

going to Cambodia compared with $1,350 million to Indonesia. Aid to Africa has only amounted to a total of $360 million, with $250 million of this going to Algeria.

**TABLE III--COMMUNIST MILITARY AID EXTENSIONS, CUMULATIVE BY COUNTRY, 1955-67[a]**

| Area and Country | Million U.S. $ Aid Extended |
|---|---|
| Total | 5,510 |
| **Africa** | 360 |
| Algeria | 250 |
| Congo (B) | Negl.[b] |
| Ghana | 10 |
| Guinea | 10 |
| Mali | Negl.[b] |
| Morocco | 40 |
| Somalia | 30 |
| Tanzania | 10 |
| Uganda | 10 |
| **Near East and South Asia** | 3,800 |
| Afghanistan | 250 |
| Cyprus | 30 |
| India | 610 |
| Iran | 110 |
| Iraq | 650 |
| Pakistan | 40 |
| Syria | 460 |
| UAR | 1,550 |
| Yemen | 100 |
| **Far East** | 1,350 |
| Cambodia | 10 |
| Indonesia | 1,340 |

[a]U.S. Dept. of State, Bureau of Intelligence and Research, *Communist Governments and Developing Nations: Aid and Trade in 1967*, Research Memorandum RSE-120 (Washington: 14 August 1968), p. 6. Nigeria also received some Communist military equipment during the year.

[b]Negligible indicates less than $5 million.

**Technical Assistance.** The long-run aim of the Soviet Union is to convince the Third World that communism provides the best means of rapid economic growth. Soviet technical assistance programs try to develop a preference for Soviet-type institutions. All kinds of assistance in the form of scholarships for studying in the Soviet Union offered to the young of developing countries, and this influence is added to that of the trainees of the technical assistance cadres sent to the developing countries. The result is that, even though a larger number of students are trained in the West, positions of power are going more and more to those trained by the Soviets. In addition, the students trained in the West find it more and more difficult to get jobs at home under governments which are becoming more hostile to Western political and economic doctrines.

This reluctance to recognize the expertise of Western-trained persons is of great importance where regimes are controlled by the military as is frequently the case among developing countries. The military training of the U.S.S.R. cannot be balanced by that of the West. In the Middle East the military has traditionally been the dominant group, and the effect of Soviet training on the future military leaders should not be underestimated. It is certain to have some influence on the political and economic beliefs of future military leaders.

Training of students from the developing countries has continued to be a dominant part of the Communist strategy. The Chinese, however, suspended their training in the fall of 1966. The total number of students studying in Communist countries at the end of 1967 amounted to about 14,425 and was somewhat lower than in previous years, although the number of new students going to Communist countries was about the same as in 1966 (circa 1,600). The drop is probably due to temporary factors like the return of some Arab students in the wake of the Arab-Israeli war, while some 300 Indonesian students broke off their studies in the U.S.S.R. to go to Communist China with the overturn of Sukarno.

Beginning in 1964 there has been a noticeable leveling off of Communist academic exchange programs. The num-

her now coming is about one-half the former 3,000 per year, due to more exacting admission requirements and the fact that most East European academic institutions have probably reached their capacity. It is likely that unless capacity is expanded, the number of new students will be determined by the number of vacancies that occur.

**TABLE IV--ACADEMIC STUDENTS FROM LESS DEVELOPED COUNTRIES STUDYING IN COMMUNIST COUNTRIES AS OF DECEMBER 1967[a]**

| | USSR | Eastern Europe |
|---|---|---|
| Total | 10.275 | 4,150 |
| Africa | 5,750 | 2,250 |
| Far East | 750 | 450 |
| Latin America | 1,100 | 300 |
| Near East and South Asia | 2,675 | 1,150 |

[a]U.S. Dept. of State, Bureau of Intelligence and Research, *Communist Governments and Developing Nations: Aid and Trade in 1967,* Research Memorandum RSE-120 (Washington: 14 August 1968), p. 10.

The average period of training in the U.S.S.R. is about 5 years, including one of Russian language study. About 40 percent of the total are registered in Lumumba University which was created to take care of the great influx of the early 1960's from the undeveloped world. The yearly number of graduates should begin to level off soon to about 700. Most of the graduates are specialists in engineering, chemistry, agronomy, and other technical fields, including a large number of medical doctors.

The schools are still bothered with a large number of poorly prepared students who owe their appointments to politics rather than to academic accomplishment. The U.S.S.R. still has the majority of the students with about 10,000 out of the 14,000; East Germany and Czechoslovakia provide for most of the remainder. Communist China's share is now almost nothing as the turmoil of the cultural revolution has stopped academic life on the mainland.

The Communist countries have continued to make technical assistance of primary importance in their foreign aid programs because of the obvious lack of skills in the undeveloped countries which hampers their aid programs. Almost 22,000 technicians were working in underdeveloped countries in 1967, about half of them in Africa. The U.S.S.R. furnished about half of all technicians with the bulk of them concentrated in the Near and Middle East. Almost three-fourths of the Chinese technicians were in Africa.

**TABLE V--COMMUNIST ECONOMIC TECHNICIANS IN LESS DEVELOPED COUNTRIES, 1967[a]**

| | USSR | Eastern Europa | Communist China |
|---|---|---|---|
| Total | 11,040 | 6,250 | 4,550 |
| Africa | 3,800 | 4,000 | 3,075 |
| Far East | 225 | 100 | 575 |
| Latin America | 15 | 100 | 0 |
| Near East and South Asia | 7,000 | 2,050 | 900 |

[a]U.S. Dept. of State, Bureau of Intelligence and Research, *Communist Governments and Developing Nations: Aid and Trade in 1967,* Research Memorandum RSE-120 (Washington: 14 August 1968), p. 10. Minimum estimates of the number of persons present for one month or more.

In addition, an estimated 2,125 technical trainees from less-developed countries were studying in Communist countries.

Trade relations have been influenced by aid programs because it is only through trade that aid can be given, and one purpose of aid is trade. Consequently, consideration of international aid patterns is almost always concerned with trade.

**TABLE VI--TECHNICAL TRAINEES FROM LESS DEVELOPED COUNTRIES TRAINING IN COMMUNIST COUNTRIES AS OF DECEMBER 1967[a]**

| | USSR | Europe | Communist China |
|---|---|---|---|
| Total | 985 | 1,090 | 50 |
| Africa | 375 | 375 | 50 |
| Asia | | 75 | |
| Latin America | 10 | 15 | |
| Near East and South Asia | 600 | 625 | |

[a]U.S. Dept. of State, Bureau of Intelligence and Research, *Communist Governments and Developing Nations: Aid and Trade in 1967*, Research Memorandum RSE-120 (Washington: 14 August 1968).

**Communist Trade.** In the latest data available covering the first half of 1967, there seems to be little change in either the value or the direction of Communist foreign trade. The only exceptions were a large decline in Communist imports from Argentina and an important increase in exports to Pakistan. Imports from Argentina fell from about $185 million in the first 6 months of 1966 to about $40 million during the first half of 1967, largely as a result of the virtual ending of wheat purchases. Trade with Pakistan, on the other hand, rose from about $70 million for the first half of 1966 to $120 million in the first half of 1967.

In 1966, the last complete year for which trade data are available, total Communist trade with the less-developed nations rose from about $4.5 billion to almost $4.8 billion, or an increase of about 7 percent. This compares with an increase of about 17 percent in 1965 and is the smallest annual percentage gain since 1962. The reduction is primarily due to lower levels of Chinese imports and of Soviet exports. Communist exports to the less-developed countries continued to exceed imports in 1966, but the trade surplus remained about the same as in 1965.

The increase in Communist trade with the less-developed countries for 1966 was almost all due to increases of trade by Eastern Europe and Communist China. East European trade increased by 10 percent over 1965. Imports increased the most, coming largely from Argentina and other Latin American countries, Spain, and Greece. East Europe's exports to Syria, Turkey, and the U.A.R. together rose almost $80 million, offsetting the $40 million decline in exports to Ghana. Communist China's trade rose almost $900 million in 1966 when a 29 percent increase in exports more than countered a 13 percent decline in imports. These increases were largely to Ceylon, Malaysia, Singapore, and the U.A.R. The total trade was largest with its neighbors, including the above-mentioned Pakistan. Because of large grain purchases from Argentina, this country continued to be an important trading partner.

In 1966, as in 1965, the developing countries accounted for about 10 percent of total Communist trade. The Communist share of the total trade of the developing countries was about 6 percent. It was concentrated in a few countries, mainly Afghanistan, Cambodia, Ceylon, Iraq, India, Mali, Syria, and the U.A.R. Near East and South Asian trade rose 11 percent in 1966 and accounted for 57 percent of total Communist trade with the less-developed countries. The U.A.R. and India remained the principal trading partners and accounted for 41 percent of the total trade of the U.S.S.R. with less-developed countries. This concentration is due to the trade momentum generated by deliveries under long-term economic credits and repayments in commodities for both economic and military credits. It also reflects the desire of those countries to continue exchanges with bilateral trading partners

as their foreign exchange holdings are reduced.

While Communist trade with Africa and Far Eastern countries fell slightly in 1966 and Latin America's share remained about the same as in 1965, Communist trade with the less-developed countries of Europe, Portugal, and Spain increased by 31 percent in 1966. This increase was almost all due to increased East European and Cuban imports from Spain. In spite of the rapid growth the absolute amounts were small, and Europe accounted for only 5 percent of total Communist trade with the less-developed countries in 1966.

Table VII shows the overall expansion of Soviet foreign trade since 1938.

**TABLE VII--SOVIET FOREIGN TRADE[a]**
**(in billion rubles; one ruble equals $1.11)**

| | |
|---|---|
| 1938 - .5 | 1962 - 12.1 |
| 1950 - 2.9 | 1963 - 12.9 |
| 1952 - 4.8 | 1964 - 13.9 |
| 1958 - 7.8 | 1965 - 14.5 |
| 1959 - 9.5 | 1966 - 15.0 |
| 1960 - 10.1 | 1967 - 16.3 |
| 1961 - 10.6 | |

[a]American Maritime Association, *Growth of the U.S.S.R. Foreign Trade Fleet* (New York: June 1965), p. 20; "U.S.S.R. Foreign Trade," *Quarterly Economic Reviews: U.S.S.R.*, no. 1, 1969, p. 9.

The increase in trade turnover has brought changes to the Russian pattern. In 1960-1961 the U.S.S.R. changed from being primarily an importer to an exporter, and it appears that the Soviet Union will continue to keep this favorable balance. No longer is Russia solely a giant consumer of raw materials from other Communist countries; for in 1965 it had trade relations with 91 countries, 13 of them socialist, 51 developing and 27 capitalist. In addition to the Communist bloc countries, the Soviet Union has strong trade ties with India, Egypt, Algeria, Afghanistan, Syria, Iran, Ceylon, Ghana, and Turkey.

Trade with the free world consists mainly of exports of raw products such as petroleum and timber and imports of manufactured goods including machinery, tools, and other production equipment. Export trade with Communist countries and the new developing nations is made up of Soviet manufactured products, military cargoes, and economic materials, i.e., petroleum, aluminum, and concrete. On the import side, Russia receives large quantities of raw products which are vital to her industry.

**Soviet Merchant Marine.** At present the trade on the 56 regular shipping routes maintained by the Soviet Union is light, but Russia is sparing no effort to triple the volume of traffic on them. These efforts, if successful, will create an even greater demand on the merchant marine.

The Soviet merchant marine has not yet had any great impact on world shipping, but its influence is starting to be felt. As it expands and becomes able to carry all of Russia's foreign commerce, the Soviets will become less and less reliant upon foreign shipping, charter markets, and vessel procurement. This independence will allow the U.S.S.R. to use her merchant fleet as an even greater instrument of Soviet political expansion and to become a strong competitor in foreign trade. According to a report in 1964 of Y.V. Savinkov, a deputy minister for the Soviet merchant marine, Russia at that time expected to have the capacity to carry all her foreign commerce in Soviet vessels by 1966. Present estimates vary widely, and at least one indicates that she is still far from this goal.

Recent incidents are just starting to cause concern of Russian competition in world shipping. In commenting about a Soviet bulk carrier which was built in Japan and chartered by Japanese interests to carry Canadian grain to Japan, it was stated that "for the first time since

the war Russian ships have been offered for charter on the world markets, thus giving real competition to ships from capitalist countries."[1] This is not an isolated example, for the U.S.S.R. has plans to open a liaison office in Japan in order to secure regular charters to make full use of their vessels which would normally be laid up because of Soviet ports freezing over during the winter. This is expected to offer serious competition to Hongkong, one of the world's shipping capitals.

Sweden and Finland, both producers of Soviet vessels, are starting to show concern over Russian competition, for they were forced in 1966 to reduce their passenger vessels on the Stockholm-Leningrad run as not competitive with Soviet-flag vessels. Sweden has also leveled other charges of discrimination by Communist countries against free world shipping. Two of the more prominent forms of this discrimination are the systematic diversion of all cargoes, imports and exports to their own vessels, and the "gradual infiltration into established West European trade routes by sheer dumping of prevailing freight rates."[2]

As the Soviet merchant marine continues its rapid expansion, the Russian economic offensive against free world shipping will become more pronounced. Warnings of this threat of world domination have come from many sources, but little action has been taken to counter it. Instead, many free world maritime nations continue to build Russian vessels and encourage trade with the U.S.S.R. Should Russia be able to maintain her present rate of growth, it is possible that "we may witness the display of Communist ships serving American ports."[3]

In the Marine Engineering Log for 15 June 1968 in the 27th *Annual Maritime Review Yearbook* issue, it was reported that the merchant fleets of the world had, in oceangoing steam and motor ships of 1,000 gross tons and over, 18,386 ships of 164,066,000 gross tons. Of this total the United States had 2,209 ships of a gross tonnage of 19,495,000 tons, equal to 11.8 percent of the world total, of which 969 ships with a gross tonnage of 10,345,000 were privately owned, and the rest were owned by the U.S. Government. This total compares with that reported for the U.S.S.R. in June 1967 of 1,362 ships of 8,086,000 gross tonnage, equal to 4.9 percent of the world total, or about the target set by the 22d Communist Party Congress for the end of 1964. This total represented a sixfold increase in tonnage for the U.S.S.R. over 1939 and a better than fourfold increase over 1950.

The data in Table VIII show past growth and future long-range predictions for the Soviet maritime fleet as of June 1962.

**TABLE VIII--GROWTH OF SOVIET MERCHANT FLEET[a]**

| Year End. | Number of Ships | Tonnage Deadweight |
|---|---|---|
| 1939 (Sept.) | 354 | 1,597,900 |
| 1946 (June) | 488 | 1,851,675 |
| 1950 | 432 | 1,797,000 |
| 1955 | 604 | 2,426,000 |
| 1958 (June) | 735 | 4,939,000 |
| 1962 | 1,002 | 5,922,000 |
| 1964 | 1,227 | 8,207,000 |
| 1965 | 1,746 | 9,878,000 |
| 1970 | 2,619 | 14,817,000 |
| 1975 | 3,492 | 20,990,700 |
| 1980 | 4,365 | 27,164,500 |

[a]"Russia's Maritime Build-up," *Marine Engineering/Log,* 15 June 1962, p. 69. Russian Fleet expansion in 1965-1980 projected in accordance with tonnage goals set by the 22d Communist Party Congress. Trend toward larger size ships will enable tonnage goals to be met with fewer ships than number listed. The 1967 goal was not reached until 1967.

[1] American Maritime Association, *Growth of the U.S.S.R. Foreign Trade Fleet* (New York: June 1965), p. 20.

[2] *Ibid.*

[3] *Ibid.*

TABLE IX–INVENTORY OF U.S. CONTROLLED MERCHANT SHIPS: OCEAN-GOING SHIPS[a] 1000 GROSS TONS & OVER[b]
As of March 1, 1968 (In Thousands of Deadweight Tons)

| | TOTAL SHIPS | | PRIVATELY OWNED | | | | MARITIME ADMINISTRATION SHIPS | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | U.S. FLAG | | FOREIGN FLAG[c] | | OPERATING | | LAID-UP | |
| | NO. | DWT. | NO. | DWT. | NO. | DWT. | NO. | DWT. | NO. | DWT. |
| TOTAL ALL SHIPS | 2580 | 40,530.5 | 988 | 15,216.9 | 423 | 14,707.5 | 158 | 1,658.8 | 1011 | 8,947.3 |
| I DRY CARGO | 1639 | 20,191.0 | 668 | 8,099.7 | 149 | 3,762.1 | 157 | 1,649.0 | 665 | 6,680.2 |
| GENERAL | 1383 | 15,282.5 | 582 | 6,880.9 | 40 | 431.1 | 153[D] | 1,623.0 | 608 | 6,347.5 |
| BULK | 159 | 4,370.5 | 59 | 1,074.2 | 99 | 3,285.3 | -- | -- | 1 | 11.0 |
| REEFER | 41 | 231.7 | 19 | 109.5 | 9 | 40.4 | 2 | 13.9 | 11 | 67.9 |
| COASTAL | 56 | 306.3 | 8 | 35.1 | 1 | 5.3 | 2 | 12.1 | 45 | 253.8 |
| II PASSENGER CARGO & TRANSPORT | 101 | 803.3 | 27[E] | 234.7 | 9 | 68.8 | 1[F] | 9.8 | 64[G] | 490.0 |
| III TANKERS | 591 | 18,166.6 | 293 | 6,882.5 | 265 | 10,876.6 | -- | -- | 33 | 407.5 |
| MAJOR | 522 | 17,669.1 | 254 | 6,594.5 | 244 | 10,691.4 | -- | -- | 24 | 383.2 |
| COASTAL TYPES | 43 | 114.1 | 26 | 60.5 | 8 | 29.3 | -- | -- | 9 | 24.3 |
| SPECIAL PRODUCTS | 26 | 383.4 | 13 | 227.5 | 13 | 155.9 | -- | -- | -- | -- |
| IV MERCHANT TYPE MILITARY AUXILIARIES | 249 | 1,369.6 | -- | -- | -- | -- | -- | -- | 249 | 1,369.6 |

[a] "U.S. Transfers Foreign," *Marine Engineering/Log,* 15 June 1968, p. 192.

[b] Excludes ships in the custody of the Department of Defense.

[c] Selected Panamanian, Honduran and Liberian flag ships.

[d] Includes 7 GAA ships in ROS. One ship waiting scrap is included in layup.

[e] Includes SS *Cristobal* of the Panama Canal Co.

[f] The Nuclear Ship *Savannah.*

[g] Includes: 20 Victory type and 10 Liberty type ships of 258,300 Dwt. converted to troop ships.

Even if the U.S.S.R. should reach its projected goal of 27,164,500 deadweight tons by 1980, it would be still far less than the tonnage presently under the control of the United States of 40,500,000 deadweight tons as shown in Table IX taken from the *Marine Engineering Yearbook* issue for June 1968.

The *Marine Engineering Yearbook* also shows that much of the shipping controlled by U.S. interests is of modern design. Table X shows that a total of 48,438,261 deadweight tons were ordered by American and affiliated interests since 1950.

**TABLE X--YEARLY RECORD OF VESSELS ORDERED ABROAD BY AMERICAN INTERESTS[a]**

| Date of Survey | No. of Vessels Ordered | Total DWT |
|---|---|---|
| Sept 1950 | 32 | 559,900 |
| June 1951 | 68 | 1,070,410 |
| Feb 1962 | 78 | 1,683,660 |
| Sept 1953 | 83 | 1,959,064 |
| March 1955 | 41 | 781,797 |
| June 1956 | 232 | 6,660,835 |
| May 1957 | 153 | 5,134,750 |
| May 1958 | 104 | 4,285,300 |
| May 1959 | 58 | 1,284,075 |
| May 1960 | 47 | 1,301,580 |
| May 1961 | 56 | 1,413,970 |
| May 1962 | 64 | 1,634,725 |
| May 1963 | 34 | 853,030 |
| May 1964 | 78 | 3,450,250 |
| May 1965 | 43 | 1,180,390 |
| April 1966 | 58 | 2,204,555 |
| April 1967 | 91 | 3,999,050 |
| April 1968 | 94 | 9,081,720 |

[a]"U.S. Orders Abroad," *Marine Engineering/Log,* 15 June 1968, p. 198.

Most of the building for American interests has been abroad, and most of it is from developed countries because only long-established shipyards in Europe and Japan are able to construct these vessels, especially the super-mammoth size tankers and bulk carriers of recent years. It is also true that these vessels are being registered in less-developed countries to provide tax havens for the American businessman and to eliminate the American seaman who, for many years, has been the highest paid in the world. (See Appendix III)

The threat of the merchant fleet of the U.S.S.R. to the United States is not presently great in terms of its ability to carry economic goods in world trade, as the data in Appendix III shows. It is great, however, in terms of its ability to provide logistic support for Soviet naval forces. This potential is increased if present Soviet plans are realized. At that time the Soviet Fleet might be able to compete on a cut-price basis on many important trade routes and to affect the loyalties of significantly important strategic countries.

The present merchant ship tonnage of the U.S.S.R. is estimated to about equal her present needs for export and import trade, relieving her of the former need to employ foreign shipping for trade and aid.

In the light of the available data, it appears that the United States is well provided with access to merchant shipping for the foreseeable future. The U.S.S.R. will be able to provide for its own trade needs, but not much more, and its total tonnage will be a minor percentage of world shipping, even if it reaches its 1980 goal shown in table VIII. The real threat in the growth of the U.S.S.R. fleet is its newly obtained ability to reach out with aid and trade anywhere in the world, and particularly into areas that it could never before penetrate. Clearly this is a real strategic breakthrough that requires recognition and study by the members of the free world and the United States in particular.

The growth of the merchant marine of the U.S.S.R. has been paralleled by the growth of her navy which, for the first time in many years, now appears

on all the seven seas. Clearly, the merchant marine, by providing logistic capabilities, enlarges the scope of Soviet naval action, besides providing a training ground for nautical personnel. When this increased capability is combined with access to friendly ports like those in Cuba or those in Africa, it exposes continental United States and Europe to nuclear threats from offshore submarines or other vessels.

**Summary and Conclusions.** Up until 1954 the Soviet Union and allied Communist nations were primarily receipients of economic, military, and technical aid. This massive help was very important to their development, and much of it came from the United States. Soviet Russia exploited her sister Communist states until after the death of Stalin in 1953 and the uprisings in Poland, Hungary, East Germany, and Rumania.

Yugoslavia broke away from Soviet Russia earlier as a result of discontent with economic agreements. In additon to open solicitation of grants and technical aid from the free world, the Soviets, through reparations claims, joint-stock companies, and trade agreements, ruthlessly exploited their Communist neighbors.

In recent years, beginning in 1954, the U.S.S.R. has effectively broken out of the free world's containment lines by the use of its economic, military, and technical aid programs supported by the necessary building of a merchant fleet and navy. It is impossible to say whether this series of developments was the result of an original plan or whether developing capabilities to supply goods and needs for raw materials naturally led to the end results. In any event, the breakout is supported by drives of basic philosophical Communist beliefs and the national pride of a great power in competition with other nations of the world. In part, its program is certainly defensive in that it is designed to retain within its orbit the satellite countries of Eastern Europe, and in part offensive in that it is a primary vehicle for exporting and supporting Soviet national aims.

As the Soviet capabilities grew, so did its power to oppose the interests of the free world, and the United States in particular. Supplies for Vietnam, bases in Cuba and on the North African coast, and ships in all the oceans can and do interfere with the plans and power of the United States It forces us to consider updating our naval fleet and our merchant marine and the establishment of an antiballistic missile system that can counter both long-range nuclear missiles from the U.S.S.R. and shorter range missiles fired from offshore vessels or submarines.

## APPENDIX I--COMMUNIST EXPORTS TO SELECTED LESS DEVELOPED COUNTRIES, 1964-66[a] (Million Current U.S. $)

| AREA AND COUNTRY | TOTAL[B] | | | USSR | | | EASTERN EUROPE | | | COMMUNIST CHINA | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 |
| TOTAL | 2,084.0 | 2,365.4 | 2,513.5 | 774.3 | 910.7 | 886.3 | 771.3 | 914.6 | 977.7 | 389.4 | 438.1 | 555.4 |
| AFRICA | 324.8 | 385.5 | 355.1 | 88.9 | 115.6 | 103.8 | 136.8 | 145.1 | 128.0 | 48.9 | 85.7 | 104.7 |
| ALGERIA[C] | 39.1 | 29.3 | 35.8 | 15.7 | 15.4 | 18.8 | 17.2 | 6.7 | 8.4 | 4.2 | 5.6 | 7.0 |
| ANGOLA | 0.5 | 0.4 | 1.2 | ... | ... | ... | 0.5 | 0.4 | 1.2 | E | ... | ... |
| CAMEROON | 1.4 | 2.1 | 3.9 | E | 0.1 | 0.1 | 1.4 | 2.0 | 3.5 | E | ... | 0.3 |
| CHAD | 0.8 | 0 | 1.2 | ... | ... | ... | 0.3 | N.A. | 0.6 | 0.5 | ... | 0.6 |
| CONGO (B) | 0.1 | 2.7 | 1.3 | E | 2.7 | 1.3 | 0.1 | ... | ... | ... | ... | ... |
| CONGO (K) | ... | ... | 1.9 | ... | ... | ... | ... | ... | 1.9 | ... | ... | ... |
| DAHOMEY | ... | 1.3 | 1.6 | E | 0.4 | 0.4 | ... | 0.4 | 0.6 | ... | 0.5 | 0.6 |
| ETHIOPIA | 9.3 | 15.2 | 12.9 | 3.3 | 7.8 | 5.2 | 4.2 | 4.7 | 5.1 | 1.8 | 2.7 | 2.6 |
| GABON | 0.2 | 0.3 | 0.4[D] | ... | ... | ... | 0.2 | 0.3 | 0.4[D] | ... | ... | ... |
| GHANA | 53.1 | 109.5 | 41.2 | 19.5 | 34.6 | 14.0 | 30.9 | 60.2 | 19.7 | 2.7 | 14.7 | 7.5 |
| GUINEA[F] | 9.2 | 9.7 | 10.8 | 9.2 | 9.7 | 10.8 | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. |
| IVORY COAST | 1.5 | 1.7 | 1.8 | ... | 0.3 | ... | 0.9 | 1.4 | 1.6 | 0.5 | ... | 0.2 |
| KENYA | 6.5 | 5.9 | 11.7 | E | 1.0 | 1.7 | 4.6 | 2.2 | 4.6 | 1.9 | 2.7 | 5.4 |
| MALAGASY REPUBLIC | 1.6 | 3.1 | 3.6 | ... | ... | ... | 1.3 | 1.5 | 0.7 | 0.3 | 1.6 | 2.9 |
| MALI | 17.6 | 21.0 | 20.2 | 13.2 | 9.8 | 3.6 | 1.6 | 1.4 | 1.6 | 2.8 | 9.8 | 10.0 |
| MOROCCO | 86.1 | 71.2 | 64.4 | 8.1 | 8.4 | 19.8 | 18.1 | 14.2 | 20.3 | 11.8 | 11.9 | 16.4 |
| MOZAMBIQUE | 0.2 | 0.3 | 0.3 | ... | ... | ... | 0.2 | 0.3 | 0.3 | E | E | E |
| NIGER | 0.7 | 2.0 | 2.6 | ... | ... | ... | 0.2 | 0.2 | 0.1 | 0.5 | 1.8 | 2.5 |
| NIGERIA | 28.8 | 33.9 | 33.4 | 1.2 | 3.2 | 4.6 | 18.8 | 17.1 | 14.7 | 8.8 | 13.6 | 14.1 |
| RHODESIA | 1.1 | 0.9 | 0.9[D] | ... | ... | ... | 1.1 | 0.8 | 0.8[D] | ... | 0.1 | 0.1[D] |
| SENEGAL[G] | 3.6 | 3.4 | 5.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 0.7 | 3.3 | 3.0 | 4.1 |
| SIERRA LEONE | 4.4 | 6.1 | 8.0 | ... | 0.1 | 0.7 | 3.6 | 4.7 | 5.8 | 0.8 | 1.3 | 1.5 |
| SOMALIA[F] | 8.3 | 6.9 | 8.7 | 8.3 | 6.9 | 8.7 | ... | ... | ... | ... | ... | ... |
| SUDAN | 28.1 | 26.8 | 32.3 | 6.3 | 7.2 | 7.4 | 15.2 | 12.3 | 14.4 | 6.6 | 6.6 | 10.5 |
| TANZANIA[H] | 2.5 | 7.3 | 14.9 | 0.2 | 0.4 | 1.0 | 1.4 | 2.0 | 3.5 | 0.9 | 4.9 | 10.4 |
| TOGO | 1.8 | 2.0 | 2.8 | 0.7 | 0.8 | 0.7 | 0.5 | 0.5 | 0.7 | 0.6 | 0.6 | 1.3 |
| TUNISIA | 16.3 | 17.2 | 24.4 | 3.1 | 6.6 | 8.7 | 13.0 | 9.0 | 14.0 | 0.2 | 1.6 | 1.7 |
| UGANDA | 1.7 | 4.9 | 7.1 | E | 0.1 | 0.1 | 1.0 | 2.1 | 2.2 | 0.7 | 2.7 | 4.8 |
| ZAMBIA | 0.3 | 0.4 | 0.8 | ... | ... | ... | 0.3 | 0.4 | 0.6 | ... | ... | 0.2 |

**APPENDIX I–continued**

| AREA AND COUNTRY | TOTAL[B] | | | USSR | | | EASTERN EUROPE | | | COMMUNIST CHINA | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 |
| EUROPE | 105.3 | 115.7 | 100.8 | 3.7 | 20.2 | 6.2 | 35.6 | 59.4 | 52.4 | 0.4 | 1.9 | 3.8 |
| PORTUGAL | 9.8 | 15.1 | 12.9 | ... | ... | ... | 9.6 | 11.9 | 12.5 | 0.2 | 0.2 | 0.2 |
| SPAIN | 95.5 | 100.6 | 87.9 | 3.7 | 20.2 | 6.2 | 26.0 | 47.5 | 39.9 | 0.2 | 1.7 | 3.6 |
| FAR EAST | 348.7 | 359.2 | 314.2 | 60.5 | 67.3 | 17.6 | 54.4 | 59.3 | 50.9 | 231.1 | 228.7 | 243.1 |
| BURMA | 47.4 | 45.9 | 26.5 | 6.4 | 5.3 | 5.2 | 9.3 | 12.9 | 8.6 | 31.7 | 27.7 | 12.7 |
| CAMBODIA | 19.7 | 29.7 | 31.3 | 1.8 | 2.9 | 2.4 | 6.2 | 10.7 | 8.4 | 10.4 | 14.1 | 18.7 |
| INDONESIA[G] | 163.2[D] | 149.4[D] | 79.1[D] | 47.1 | 54.4 | 4.8 | 26.8[D] | 24.5[D] | 22.1[D] | 89.3[D] | 70.5[D] | 51.7[D] |
| MALAYSIA[I] | 110.4 | 116.4 | 59.2 | 3.4 | 2.9 | 0 | 6.8 | 5.2 | 2.4 | 98.8 | 106.4 | 56.6 |
| SARAWAK | ... | 10.0 | 14.6 | ... | ... | ... | ... | 0.1 | ... | ... | 9.9 | 14.6 |
| SINGAPORE | ... | ... | 94.0 | ... | ... | 2.8 | ... | ... | 2.4 | ... | ... | 88.8 |
| TAIWAN | 0.9 | 0.1 | 0.2 | ... | ... | ... | E | ... | 0.1 | 0.9 | 0.1 | E |
| THAILAND | 7.1 | 7.7 | 9.3 | 1.8 | 1.8 | 2.4 | 5.3 | 5.9 | 6.9 | 0 | ... | ... |
| LATIN AMERICA | 122.5 | 130.9 | 129.6 | 29.1 | 49.5 | 37.5 | 88.7 | 77.9 | 89.4 | 2.0 | 2.2 | 2.2 |
| ARGENTINA | 18.1 | 33.9 | 23.1 | 4.5 | 20.3 | 7.4 | 13.4 | 13.3 | 15.3 | 0.2 | 0.3 | 0.4 |
| BARBADOS | 0.3 | 0.3[D] | ... | ... | ... | ... | 0.3 | 0.3[D] | ... | ... | ... | ... |
| BOLIVIA | 1.6 | 2.0 | 2.1 | ... | ... | ... | 1.6 | 2.0 | 2.1 | ... | ... | E |
| BRAZIL | 65.4 | 57.1 | 64.1 | 24.0 | 27.7 | 27.7 | 40.8 | 29.4 | 36.4 | 0.6 | E | E |
| CHILE | 2.1 | 2.1 | 3.7 | ... | ... | ... | 2.0 | 1.4 | 3.5 | ... | 0.1 | 0.2 |
| COLOMBIA | 8.5 | 10.3 | 12.3 | ... | 0.3 | 1.1 | 8.5 | 10.0 | 11.2 | ... | ... | ... |
| COSTA RICA | 0.2 | ... | 0.3[D] | ... | ... | ... | 0.2 | ... | 0.3[D] | ... | ... | ... |
| ECUADOR | 1.2 | 1.4 | 1.6[D] | ... | ... | ... | 1.1 | 1.2 | 1.5[D] | 0.1 | 0.1 | ... |
| EL SALVADOR | 0.6 | 0.3[D] | 0.3[D] | ... | ... | ... | 0.5 | 0.2[D] | 0.2[D] | 0.1 | 0.1 | 0.1[D] |
| GUYANA | 2.1 | 2.5 | 2.1 | ... | ... | ... | 1.2 | 1.6 | 1.2 | 0.6 | 0.9 | 0.9 |
| HAITI | 1.6 | ... | ... | ... | ... | ... | 1.6 | ... | ... | ... | ... | ... |
| HONDURAS | 1.8 | 1.5 | 1.1 | ... | ... | ... | 1.8 | 1.5 | 1.1 | E | ... | ... |
| JAMAICA | 0.2 | 0.1 | N.A. | ... | ... | ... | 0.2 | 0.1 | N.A. | E | ... | N.A. |
| MEXICO | 4.3 | 5.8 | 4.2 | 0.3 | 0.8 | 0.7 | 4.0 | 4.9 | 3.5 | E | 0.1 | E |
| PERU | 1.6 | 2.1 | 3.1 | ... | ... | ... | 1.6 | 2.1 | 3.1 | E | ... | E |
| SURINAM | ... | ... | ... | ... | ... | ... | ... | ... | ... | E | ... | ... |
| TRINIDAD AND TOBAGO | 0.6 | 0.7 | 0.4 | ... | ... | ... | 0.6 | 0.7 | ... | ... | ... | ... |
| URUGUAY | 5.4 | 2.8 | 2.8 | 0.3 | 0.4 | 0.6 | 2.8 | 1.8 | 2.1 | E | 0.1 | 0.1 |
| VENEZUELA | 6.9 | 8.0 | 8.4 | ... | ... | ... | 6.5 | 7.4 | 7.9 | 0.4 | 0.5 | 0.5 |

APPENDIX I—continued

| AREA AND COUNTRY | TOTAL[B] | | | USSR | | | EASTERN EUROPE | | | COMMUNIST CHINA | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 |
| NEAR EAST AND SOUTH ASIA | 1,182.7 | 1,374.1 | 1,613.8 | 592.1 | 658.1 | 721.2 | 455.8 | 572.9 | 657.0 | 107.0 | 119.6 | 201.6 |
| ADEN | 9.4 | 6.8 | 5.7 | ... | ... | ... | 8.3 | 5.0 | 4.3 | 1.1 | 1.8 | 1.4 |
| AFGHANISTAN | 51.9[D] | 58.2[D] | 79.8[D] | 47.4 | 51.6 | 73.3 | 4.5[D] | 6.6[D] | 6.5[D] | ... | ... | ... |
| CEYLON[G] | 89.1 | 61.3 | 88.0 | 24.4 | 21.3 | 21.3 | 18.5 | 15.3 | 17.7 | 42.9 | 23.9 | 45.6 |
| CYPRUS | 5.4 | 8.7 | 8.3 | 1.3 | 3.4 | 3.3 | 4.1 | 5.3 | 5.0 | ... | ... | ... |
| GREECE | 72.2 | 103.2 | 101.5 | 25.9 | 36.7 | 38.4 | 45.9 | 65.8 | 62.6 | 0.1 | 0.1 | 0.5 |
| IRAN | 47.5 | 41.6 | 75.2 | 21.8 | 15.3 | 31.0 | 21.6 | 25.0 | 28.8 | 0 | ... | 11.2 |
| IRAQ | 84.1 | 114.5 | 101.1 | 31.0 | 29.6 | 35.9 | 32.0 | 60.5 | 42.2 | 14.6 | 16.9 | 21.2 |
| INDIA | 349.9 | 343.1 | 324.1 | 234.8 | 215.0 | 193.3 | 115.0 | 126.9 | 130.5 | 0.1 | E | E |
| ISRAEL | 16.4 | 16.3 | 16.9 | ... | ... | ... | 16.4 | 16.3 | 16.9 | E | E | E |
| JORDAN | 15.4 | 18.9 | 21.1 | 1.6 | 2.9 | 3.7 | 11.6 | 11.2 | 10.5 | 2.2 | 3.7 | 5.6 |
| KUWAIT | 7.9 | 29.4 | 36.8 | 2.1 | 6.7 | 7.8 | 3.7 | 10.5 | 13.8 | 2.1 | 12.2 | 15.2 |
| LEBANON | 28.5 | 42.4 | 50.1 | 6.0 | 5.6 | 5.6 | 19.9 | 31.9 | 36.8 | 2.6 | 4.9 | 7.7 |
| LIBYA | 13.2 | 23.2 | 31.0 | 2.8 | 5.0 | 3.9 | 8.9 | 13.3 | 19.2 | 1.5 | 4.8 | 7.9 |
| MALTA | 4.1 | 4.3 | 5.2 | ... | ... | ... | 3.8 | 3.8 | 4.5 | 0.3 | 0.4 | 0.7 |
| NEPAL[F] | 1.2 | 2.1 | 1.2 | 1.2 | 2.1 | 1.2 | ... | ... | ... | ... | ... | ... |
| PAKISTAN[G] | 36.7 | 49.5 | 88.4 | 11.0 | 13.2 | 39.0 | 9.2 | 17.4 | 20.3 | 16.3 | 18.4 | 28.5 |
| SAUDI ARABIA[F] | 0.7 | 3.6 | 2.9 | 0.7 | 3.6 | 2.9 | ... | ... | ... | ... | ... | ... |
| SYRIA | 45.4 | 42.4 | 86.8 | 12.2 | 12.7 | 22.7 | 23.0 | 19.7 | 45.1 | 5.4 | 5.8 | 15.7 |
| TURKEY | 43.9 | 57.7 | 85.7 | 9.9 | 16.7 | 27.4 | 34.0 | 41.0 | 58.2 | ... | ... | 0.1 |
| UNITED ARAB REPUBLIC | 256.6 | 338.9 | 392.2 | 154.8 | 208.7 | 198.7 | 75.4 | 97.4 | 134.1 | 17.8 | 26.7 | 40.3 |
| YEMEN[F] | 3.2 | 8.0 | 11.8 | 3.2 | 8.0 | 11.8 | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. |

[a]U.S. Dept. of State, Bureau of Intelligence and Research, *Communist Governments and Developing Nations: Aid and Trade in 1967,* Research Memorandum RSE-120 (Washington: 14 August 1968), p. 16-19. Data for the U.S.S.R. are from official Soviet trade yearbooks. Data for other Communist countries are based on official trade statistics of the Free World country involved—that is, Communist exports indicated are the Free World trading partners' reported imports. In some cases where such data were not available, independent estimates were made. A leader entry ( . . . . ) indicates that no figure for trade is known, although some trade may have taken place.

[b]Total figures include the following Communist exports, in million current U.S. dollars: Albania, 1964, 0.6, 1965, 2.2, 1966, 0.8; Cuba, 1964, 144.6, 1965, 95.1, 1966, 87.2; North Korea 1964, 0.7, 1965, 0.8, 1966, 3.4; North Vietnam, 1964, 3.1, 1965, 3.9, 1966, 2.7.

[c]With the exception of Soviet data, trade figures for 1966 are at an annual rate for January-June.

APPENDIX I--continued

[d]Data are estimated.

[e]Less than $50,000.

[f]Total includes Soviet trade figures only.

[g]Trade figures for Communist China include Outer Mongolia's exports to Ceylon, Indonesia, Pakistan, and Senegal.

[h]Data are for Tanganyika only.

[i]Data for 1964 and 1965 include both Malaysia and Singapore. Data for 1966 are for Malaysia only.

## APPENDIX II–COMMUNIST IMPORTS FROM SELECTED LESS DEVELOPED COUNTRIES, 1964-66[a] (Million Current U.S. $)

| AREA AND COUNTRY | TOTAL[B] | | | USSR | | | EASTERN EUROPE | | | COMMUNIST CHINA | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 |
| TOTAL | 1,760.4 | 2,123.7 | 2,274.0 | 654.0 | 845.4 | 903.2 | 719.5 | 811.2 | 918.9 | 299.2 | 385.6 | 335.9 |
| AFRICA | 208.5 | 272.5 | 255.9 | 58.8 | 84.8 | 71.5 | 93.6 | 105.6 | 127.8 | 41.3 | 68.9 | 44.8 |
| ALGERIA[C] | 9.7 | 18.4 | 22.8 | 3.8 | 3.8 | 5.9 | 5.0 | 6.8 | 8.5 | ... | 2.6 | 3.2 |
| ANGOLA | 0.6 | 1.4 | 1.8 | ... | ... | ... | 0.4 | 1.4 | 1.8 | 0.2 | E | ... |
| CAMEROON[F] | 1.3 | 0.4 | 1.5 | 0.1 | 0 | 0.4 | 0.6 | 0.4 | 1.1 | 0 | ... | ... |
| CHAD | ... | ... | 0.1 | ... | ... | ... | ... | ... | 0.1 | ... | ... | ... |
| CONGO (B) | 0.9 | ... | 0.4 | ... | ... | 0.4 | 0.6 | ... | ... | 0.3 | ... | ... |
| CONGO (K) | N.A. | N.A. | N.A. | ... | ... | ... | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. |
| DAHOMEY | ... | E | E | ... | ... | ... | ... | E | ... | ... | ... | ... |
| ETHIOPIA | 3.0 | 4.2 | 4.3 | 2.4 | 2.6 | 3.0 | 0.6 | 1.5 | 0.8 | 0 | 0.1 | 0.5 |
| GABON | 0.3 | 1.1 | 1.5[D] | ... | ... | ... | 0.3 | 1.1 | 1.5[D] | ... | ... | ... |
| GHANA | 33.9 | 56.9 | 47.7 | 20.7 | 30.7 | 24.2 | 10.4 | 20.5 | 18.3 | 2.8 | 5.7 | 5.2 |
| GUINEA[G] | 2.2 | 3.6 | 3.6 | 2.2 | 3.6 | 3.6 | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. |
| IVORY COAST | 3.4 | 8.3 | 2.6 | 0.9 | 5.1 | ... | 2.5 | 3.2 | 2.6 | ... | ... | E |
| KENYA | 4.4 | 4.6 | 7.0 | 0.1 | 0.7 | 1.1 | 3.2 | 2.1 | 3.3 | 1.1 | 1.8 | 2.6 |
| MALAGASY REPUBLIC | 0.9 | 0.9 | 0.5 | ... | ... | ... | 0.9 | 0.9 | 0.5 | ... | E | N.A. |
| MALI | 7.5 | 2.6 | 1.6 | 3.7 | 2.6 | 1.6 | 1.2 | E | ... | 2.0 | E | E |
| MOROCCO | 53.7 | 48.8 | 53.6 | 6.5 | 11.0 | 9.4 | 23.7 | 20.6 | 29.8 | 12.3 | 9.2 | 7.8 |
| MOZAMBIQUE[F] | 0.4 | 0.1 | 0.1 | ... | ... | ... | 0.2 | 0.1 | 0.1 | 0.2 | ... | ... |
| NIGER | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| NIGERIA | 12.8 | 21.6 | 9.2 | 4.2 | 5.8 | 0.8 | 7.0 | 13.8 | 8.4 | 1.6 | 2.0 | ... |
| RHODESIA | 2.6 | 5.3 | 5.3[D] | ... | ... | ... | 2.6 | 5.3 | 5.3[D] | ... | E | ... |
| SENEGAL[H] | 1.9 | 0.7 | 0.8 | 0.3 | 0.6 | 0.8 | 0.1 | 0.1 | E | ... | ... | ... |
| SIERRA LEONE | 0.3 | N.A. | N.A. | ... | ... | ... | 0.3 | N.A. | N.A. | ... | N.A. | N.A. |
| SOMALIA | E | ... | ... | E | 0 | 0 | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. |
| SUDAN[F] | 24.2 | 40.1 | 33.0 | 5.0 | 12.4 | 7.3 | 14.3 | 12.3 | 14.5 | 4.9 | 15.4 | 11.2 |
| TANZANIA[I] | 11.2 | 14.8 | 15.8 | 2.0 | 1.7 | 1.8 | 2.7 | 1.0 | 4.5 | 6.5 | 12.1 | 9.5 |
| TOGO | 0.5 | 0.6 | ... | 0.4 | 0.6 | 0 | 0.1 | E | ... | ... | ... | ... |
| TUNISIA | 10.3 | 11.0 | 14.1 | 2.2 | 3.6 | 3.8 | 7.8 | 4.9 | 9.5 | 0.3 | 2.5 | 0.8 |
| UGANDA | 11.1 | 21.6 | 12.6 | ... | 0 | 0.3 | 2.0 | 4.1 | 8.9 | 9.1 | 17.5 | 3.4 |
| ZAMBIA | 11.4 | 5.5 | 16.0 | 4.3 | ... | 7.1 | 7.1 | 5.5 | 8.3 | ... | ... | 0.6 |

**APPENDIX II–continued**

| AREA AND COUNTRY | TOTAL[B] | | | USSR | | | EASTERN EUROPE | | | COMMUNIST CHINA | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 |
| EUROPE | 56.9 | 70.3 | 143.5 | 4.3 | 2.2 | 6.6 | 21.0 | 28.8 | 57.9 | 0.2 | E | E |
| PORTUGAL | 7.0 | 7.3 | 7.1 | ... | ... | ... | 6.8 | 6.2 | 6.7 | 0.2 | E | E |
| SPAIN | 49.9 | 63.0 | 136.4 | 4.3 | 2.2 | 6.6 | 14.2 | 22.6 | 51.2 | E | E | E |
| FAR EAST | 253.9 | 285.8 | 297.9 | 117.8 | 160.1 | 157.3 | 55.0 | 49.0 | 58.0 | 75.4 | 71.2 | 77.9 |
| BURMA[F] | 45.7 | 33.9 | 21.8 | 20.3 | 13.6 | 0.3 | 8.7 | 2.9 | 4.4 | 16.7 | 17.4 | 17.1 |
| CAMBODIA[F] | 13.3 | 14.7 | 12.7 | 0.8 | 1.2 | 0.6 | 5.1 | 4.8 | 5.4 | 6.2 | 6.5 | 5.7 |
| INDONESIA[H] | 88.5 | 82.2 | 54.8 | 25.8 | 32.0 | 30.8 | 9.2 | 9.7 | 13.8 | 52.2 | 40.0 | 9.5 |
| MALAYSIA[J] | 105.3 | 150.6 | 165.1 | 70.9 | 112.7 | 125.6 | 30.9 | 27.8 | 18.3 | 0.3 | 7.3 | 21.2 |
| SARAWAK | ... | E | ... | ... | ... | ... | ... | ... | ... | ... | E | ... |
| SINGAPORE | ... | ... | 37.7[D] | ... | ... | ... | ... | ... | 10.3[D] | ... | ... | 24.4[D] |
| TAIWAN | ... | E | E | ... | ... | ... | ... | E | E | ... | ... | ... |
| THAILAND | 1.1 | 4.4 | 5.8 | E | 0.6 | 0 | 1.1 | 3.8 | 5.8 | 0 | ... | ... |
| LATIN AMERICA | 324.5 | 391.7 | 439.1 | 63.0 | 108.5 | 159.7 | 153.0 | 186.2 | 187.7 | 92.0 | 96.2 | 86.7 |
| ARGENTINA | 159.8 | 186.5 | 247.7 | 19.9 | 72.0 | 107.3 | 45.9 | 30.7 | 55.1 | 91.7 | 83.7 | 84.0 |
| BRAZIL | 89.0 | 93.2 | 106.0 | 37.1 | 32.8 | 30.6 | 51.2 | 60.0 | 72.5 | 0.2 | 0.4 | 1.1 |
| CHILE | 2.7 | 7.3 | 5.1 | ... | ... | ... | 2.0 | 0.9 | 3.9 | 0 | 6.4 | 1.2 |
| COLOMBIA | 8.0 | 11.8 | 18.4 | ... | 0.4 | 2.3 | 8.0 | 10.8 | 16.1 | 0 | ... | ... |
| ECUADOR | 0.1 | 0.1 | 1.1[D] | ... | ... | ... | 0.1 | 0.1 | 1.1[D] | ... | ... | ... |
| EL SALVADOR | 0.7[D] | 3.8[D] | 0.2[D] | ... | ... | ... | 0.6[D] | 1.5[D] | 0.1[D] | 0.1[D] | 2.3[D] | 0.1[D] |
| GUYANA | 4.0 | 0.2 | ... | ... | ... | ... | E | 0.2 | ... | ... | ... | ... |
| JAMAICA | 4.9 | ... | N.A. | 2.9 | ... | ... | 2.0 | ... | N.A. | 0 | E | N.A. |
| MEXICO | 22.4 | 61.5 | 18.8 | 2.1 | 0.3 | 10.3 | 17.7 | 58.6 | 8.0 | 0 | 2.5 | E |
| PERU | 12.7 | 17.6 | 21.2 | ... | ... | ... | 12.6 | 16.9 | 21.2 | E | 0.7 | E |
| URUGUAY | 18.7 | 8.7 | 19.3 | 1.0 | 3.0 | 9.2 | 12.8 | 5.5 | 9.6 | E | 0.2 | 0.3 |
| VENEZUELA | 1.5 | 1.0 | 1.3 | ... | ... | ... | 0.1 | 1.0 | 0.1 | ... | ... | ... |

APPENDIX II–continued

| AREA AND COUNTRY | TOTAL[B] | | | USSR | | | EASTERN EUROPE | | | COMMUNIST CHINA | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 |
| NEAR EAST AND SOUTH ASIA | 916.6 | 1,103.4 | 1,137.6 | 410.1 | 489.8 | 508.1 | 396.9 | 441.6 | 487.5 | 90.3 | 149.3 | 126.5 |
| ADEN | E | 0.1 | E | ... | ... | ... | E | ... | E | E | 0.1 | E |
| AFGHANISTAN | 27.0[D] | 22.0[D] | 22.1[D] | 22.7 | 20.2 | 18.8 | 4.3[D] | 1.8 | 3.3[D] | ... | ... | ... |
| CEYLON[H] | 59.3 | 70.0 | 70.1 | 22.9 | 19.1 | 17.3 | 10.7 | 14.8 | 14.9 | 25.6 | 36.1 | 37.2 |
| CYPRUS | 2.5 | 7.8 | 8.4 | 0.3 | 3.4 | 4.3 | 2.2 | 4.4 | 4.1 | 0 | ... | ... |
| GREECE | 65.1 | 76.4 | 99.7 | 24.6 | 28.4 | 29.7 | 40.5 | 48.0 | 64.5 | E | E | E |
| IRAN | 39.7 | 39.1 | 41.5 | 21.0 | 18.1 | 19.4 | 18.7 | 21.0 | 22.0 | 0 | E | 0.1 |
| IRAQ | 8.7 | 10.1 | 12.5 | 2.4 | 3.7 | 3.2 | 1.4 | 1.4 | 2.7 | 4.9 | 5.0 | 6.6 |
| INDIA | 275.3 | 302.7 | 303.8 | 155.9 | 188.2 | 191.1 | 118.5 | 110.4 | 112.7 | E | E | E |
| ISRAEL | 14.4 | 16.7 | 20.5 | ... | ... | ... | 14.4 | 16.5 | 20.5 | E | 0.2 | ... |
| JORDAN | 1.1 | 1.1 | 1.0 | ... | ... | ... | 1.1 | 1.1 | 0.7 | 0 | ... | 0.3 |
| KUWAIT | ... | E | 0.1 | ... | ... | ... | ... | E | E | E | E | 0.1 |
| LEBANON | 7.5 | 6.5 | 8.3 | 5.3 | 2.4 | 3.8 | 2.2 | 3.7 | 4.5 | ... | 0.4 | E |
| LIBYA | 0.6 | 0.4 | 0.2 | 0.6 | 0.4 | 0.2 | E | E | E | 0 | ... | ... |
| MALTA | E | E | 0.1 | ... | ... | ... | E | E | ... | 0 | ... | 0.1 |
| NEPAL | ... | 0.1 | 0.3 | 0 | 0.1 | 0.3 | ... | ... | ... | ... | ... | ... |
| PAKISTAN[H] | 30.3 | 67.6 | 80.2 | 2.7 | 3.9 | 29.3 | 8.8 | 12.0 | 20.4 | 14.8 | 43.4 | 30.2 |
| SAUDI ARABIA | ... | ... | 1.3 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| SYRIA | 72.5 | 58.6 | 61.3 | 17.8 | 18.6 | 20.3 | 26.1 | 23.3 | 21.6 | 28.3 | 16.7 | 19.4 |
| TURKEY | 37.9 | 69.3 | 74.9 | 9.2 | 18.9 | 18.8 | 28.7 | 48.1 | 56.1 | ... | 2.3 | ... |
| UAR | 273.6 | 353.9 | 329.7 | 123.6 | 163.4 | 150.0 | 119.3 | 135.1 | 139.5 | 16.7 | 45.1 | 32.5 |
| YEMEN | 1.1 | 1.0 | 1.6 | 1.1 | 1.0 | 1.6 | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. |

[a]U.S. Dept. of State, Bureau of Intelligence and Research, *Communist Governments and Developing Nations: Aid and Trade in 1967,* Research Memorandum RSE-120 (Washington: 14 August 1968), p. 20-23. Data for the U.S.S.R. are from official Soviet trade yearbook. Data for other Communist countries are based on official trade statistics of the Free World countries involved–that is, Communist imports indicated are the Free World trading partners' reported exports. In some cases where such data were not available, independent estimates were made. A leader entry ( . . . . ) indicates that no figure for trade is known, although some trade may have taken place.

[b]Total figures include imports to Albania, Cuba, Mongolia, North Korea, and North Vietnam in million U.S. dollars as follows: Albania, 1964, 0.6, 1965, 0.4, 1966, 1.1; Cuba, 1964, 81.2, 1965, 74.2, 1966, 103.5; Mongolia, 1966, 0.1; North Korea, 1964, 2.1, 1965, 1.5, 1966, 8.4; North Vietnam, 1964, 3.8, 1965, 5.4, 1966, 2.9.

APPENDIX II–continued

[c]With the exception of Soviet data, trade figures for 1966 are at an annual rate for Algeria (January-June).

[d]Data are estimated.

[e]Less than $50,000.

[f]With the exception of Soviet data, trade figures for 1966 are at an annual rate for the following countries–Cambodia for January-November, Burma and Mozambique for January-October, Sudan for January-September, and Cameroon for January-June.

[g]Total includes Soviet trade figures only.

[h]Trade figures for Communist China include Outer Mongolia's imports from Ceylon, Indonesia, Pakistan, and Senegal.

[i]Data are for Tanganyika only.

[j]Data for 1964 and 1965 include both Malaysia and Singapore. Data for 1966 are for Malaysia only.

## APPENDIX III

## POST-WAR BUILDING FOR AMERICAN AND AFFILIATED INTERESTS IN OTHER COUNTRIES[a]

### JAPAN

| TYPES | NO. | GROSS TONS | DEADWEIGHT | HORSEPOWER |
|---|---|---|---|---|
| TANKER (INCLUDING LPG) | 244 | 8,297,442 | 13,934,856 | 4,346,845 |
| BULK CARRIER | 95 | 2,493,171 | 4,437,845 | 1,485,950 |
| JUMBOIZING | 80 | 1,312,904 | 2,324,475 | ... |
| CARGO | 68 | 631,876 | 923,453 | 545,400 |
| DREDGE | 3 | 38,000 | 53,000 | 31,500 |
| BARGE | 23 | 67,098 | 115,700 | ... |
| OIL-WELL DRILL BARGE | 6 | 22,340 | 33,000 | 37,800 |
| ORE/OIL CARRIER | 16 | 673,700 | 1,235,955 | 308,600 |
| CAR FERRY | 1 | 5,800 | 5,400 | 8,800 |
| TUG, CREWBOAT | 16 | 5,157 | 6,200 | 33,590 |
| TOTAL | 551 | 13,510,288 | 23,009,084 | 6,777,785 |

### WEST GERMANY

| | | | | |
|---|---|---|---|---|
| TANKER | 141 | 3,953,909 | 6,788,728 | 2,191,650 |
| BULK CARRIER | 27 | 531,800 | 719,400 | 238,000 |
| JUMBOIZING | 39 | 424,000 | 751,000 | ... |
| CARGO, CONTAINER | 36 | 225,373 | 321,310 | 190,120 |
| REEFER | 3 | 11,031 | 10,290 | 10,860 |
| CABLE SHIP | 1 | 7,000 | 9,020 | 8,500 |
| TUG | 2 | 400 | 400 | 2,500 |
| HYDROFOIL FERRY | 2 | 170 | 200 | 6,550 |
| TOTAL | 251 | 5,245,683 | 8,600,348 | 2,678,180 |

### UNITED KINGDOM

| | | | | |
|---|---|---|---|---|
| TANKER (INC. LPG, SULFUR) | 94 | 2,073,271 | 3,396,102 | 1,087,945 |
| BULK CARRIER | 17 | 246,921 | 330,200 | 131,100 |
| JUMBOIZING | 2 | 24,500 | 42,500 | ... |
| REEFER | 3 | 19,500 | 16,500 | 27,000 |
| OIL-WELL DRILL BARGE | 6 | 26,580 | 36,000 | 35,000 |
| CARGO | 28 | 182,567 | 271,500 | 144,900 |
| OIL BARGE, TUG | 15 | 4,664 | 6,650 | 13,300 |
| DREDGE | 1 | 400 | 800 | 3,000 |
| TOTAL | 166 | 2,578,403 | 4,100,252 | 1,442,315 |

### SWEDEN

| | | | | |
|---|---|---|---|---|
| TANKER (INCLUDING LPG) | 67 | 2,415,721 | 3,951,480 | 1,201,030 |
| BULK CARRIER | 10 | 119,300 | 180,400 | 76,300 |
| CARGO | 5 | 20,250 | 30,830 | 26,400 |
| TOTAL | 82 | 2,555,301 | 4,162,710 | 1,303,730 |

### FRANCE

| | | | | |
|---|---|---|---|---|
| TANKER (INCLUDING LPG) | 41 | 1,166,390 | 1,878,526 | 680,055 |
| BULK CARRIER | 5 | 54,000 | 82,600 | 43,000 |
| JUMBOIZING | 3 | 41,200 | 64,000 | ... |
| OIL DRILL BARGE, ETC. | 2 | 12,195 | 18,000 | 4,000 |
| TOTAL | 51 | 1,274,195 | 2,043,126 | 727,055 |

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## APPENDIX III--continued

### HOLLAND

| TYPES | NO. | GROSS TONS | DEADWEIGHT | HORSEPOWER |
|---|---|---|---|---|
| TANKER (INC. LPG, SULFUR) | 62 | 1,267,030 | 2,091,100 | 711,185 |
| BULK CARRIER | 7 | 151,000 | 248,000 | 110,800 |
| JUMBOIZING | 7 | 56,595 | 102,100 | ... |
| BARGE | 21 | 58,310 | 92,155 | 3,180 |
| OIL-WELL DRILL BARGE | 2 | 5,500 | 9,000 | 15,000 |
| TUG, TRAWLER, SUPPLY | 11 | 4,140 | 5,560 | 14,470 |
| TOTAL | 110 | 1,542,575 | 2,552,915 | 851,635 |

### ITALY

| | | | | |
|---|---|---|---|---|
| TANKER (INC. LPG) | 23 | 648,436 | 1,041,203 | 382,200 |
| BULK CARRIER | 5 | 55,925 | 92,930 | 40,000 |
| JUMBOIZING | 2 | 16,000 | 25,000 | ... |
| LAUNCH | 7 | 105 | 140 | 3,920 |

### BELGIUM

| | | | | |
|---|---|---|---|---|
| TANKER | 20 | 294,717 | 451,588 | 188,650 |
| JUMBOIZING | 3 | 39,000 | 66,900 | ... |
| BULK CARRIER | 1 | 12,000 | 33,000 | 6,370 |
| OIL BARGE | 2 | 300 | 700 | ... |

### SWITZERLAND

| | | | | |
|---|---|---|---|---|
| SUBMARINE | 1 | 60 | 100 | 100 |

### CANADA

| | | | | |
|---|---|---|---|---|
| BULK CARRIER | 7 | 120,000 | 177,700 | 61,100 |
| TANKER | 12 | 122,480 | 189,590 | 77,000 |
| DREDGE, BARGE, TRAWLER | 11 | 24,352 | 47,000 | 24,680 |
| FERRY, SUPPLY BOAT | 3 | 6,274 | 5,880 | 13,760 |
| OIL-WELL DRILL BARGE | 1 | 2,000 | 4,000 | 6,000 |

### SPAIN

| | | | | |
|---|---|---|---|---|
| JUMBOIZING | 7 | 81,726 | 141,000 | ... |
| TANKER (INC. LPG) | 3 | 116,800 | 191,500 | 56,400 |
| BULK CARRIER | 2 | 29,200 | 39,000 | 25,000 |
| BARGE | 4 | 10,800 | 24,500 | ... |

### ARGENTINA

| | | | | |
|---|---|---|---|---|
| TANKER | 2 | 2,000 | 3,160 | 2,920 |

### DENMARK

| | | | | |
|---|---|---|---|---|
| TANKER | 12 | 612,600 | 1,086,600 | 224,500 |
| JUMBOIZING | 2 | 24,000 | 46,000 | ... |
| BULK CARRIER | 1 | 6,900 | 9,000 | 5,840 |

### NORWAY

| | | | | |
|---|---|---|---|---|
| TANKER | 3 | 52,000 | 88,000 | 27,400 |
| JUMBOIZING, CONVERSION | 6 | 61,160 | 111,800 | ... |
| BULK CARRIER | 2 | 22,000 | 32,000 | 16,200 |
| OIL-WELL DRILL BARGE, SURVEY BOAT | 2 | 2,200 | 4,250 | 6,730 |

APPENDIX III--continued

| TYPES | NO. | GROSS TONS | DEADWEIGHT | HORSEPOWER |
|---|---|---|---|---|
| **LEBANON** | | | | |
| OIL BARGE | 5 | 1,080 | 2,300 | ... |
| **FINLAND** | | | | |
| CARGO | 4 | 32,000 | 52,800 | 34,000 |
| TANKER | 1 | 2,600 | 4,000 | 1,000 |
| **NETHERLANDS ANTILLES** | | | | |
| BARGE | 1 | 560 | 906 | ... |
| **BRITISH GUIANA** | | | | |
| SALVAGE BARGE | 1 | 600 | 1,000 | ... |
| **YUGOSLAVIA** | | | | |
| BULK CARRIER | 2 | 28,000 | 44,000 | 20,000 |
| **TAIWAN** | | | | |
| TANKER | 2 | 43,000 | 72,000 | 40,920 |
| **GREECE** | | | | |
| JUMBOIZE TANKER | 4 | 122,860 | 186,500 | ... |
| CARGO BARGE, TUG | 2 | 1,500 | 2,400 | 1,530 |
| **HONG KONG** | | | | |
| BARGE, COASTAL TANKER | 14 | 4,838 | 13,150 | 300 |
| TUGBOAT | 2 | 245 | 300 | 800 |
| JUMBOIZE TANKER | 1 | 2,000 | 3,000 | ... |
| GUNBOAT | 1 | 400 | 600 | ... |
| **EGYPT** | | | | |
| CARGO BOAT | 1 | 250 | 500 | 200 |
| TANKER | 1 | 375 | 600 | 375 |
| **MALTA** | | | | |
| PIPELAYING BARGE | 1 | 600 | 1,200 | ... |
| **SINGAPORE** | | | | |
| OIL BARGE | 1 | 700 | 1,400 | ... |
| **AUSTRALIA** | | | | |
| OIL-WELL DRILLING BARGE | 1 | 8,000 | 9,000 | 6,000 |
| DECK BARGE, ETC. | 7 | 3,670 | 4,250 | 9,400 |
| GRAND TOTALS | 1,414 | 29,158,307 | 48,438,261 | 14,629,470 |

[8]"U.S. Orders Abroad," *Marine Engineering/Log,* 15 June 1968, p. 197-198.

*While the worldwide production of the ocean fisheries has been growing at an increasing measure and is making a significant contribution to solving the world's food problem, the U.S. share in this production has been declining at an alarming rate. In order that the United States may effectively participate and compete in harvesting the ocean's marine life, it must vitalize the programs for its fishing industry. Anything less will allow this aspect of the U.S. economy to continue to decline and will forfeit any hope for the United States to effectively employ the ocean's marine life in feeding mankind.*

# OCEAN FISHERIES:
## NATIONAL INSTRUMENT FOR INTERNATIONAL STABILITY

**A research paper prepared by**

**Captain John T. Robison, SC, U.S. Navy**

**School of Naval Warfare**

### INTRODUCTION

The worldwide production of ocean fisheries is growing at a rapid and steady rate. During the past 10 years the world's fish catch has almost doubled. The increasing demand for fish and the potential harvest of the oceans ensure that the fisheries will continue to maintain this growth in the future.

The world's population is growing at an alarming rate. Unfortunately, even though the fishing effort has been noteworthy, it can never feed the world. However, there is a possibility that the ocean fisheries could satisfy most of mankind's nutritional needs--his animal protein requirements. Recognizing this promise of the seas, several nations are taking unprecedented actions to harvest the protein that abounds there.

Peru, virtually absent from the fishing grounds 10 years ago, is today the world's leading fishing nation. The growth of the fisheries of the U.S.S.R. has been only slightly less spectacular. Progress in Mainland China is largely unknown. Japan, which fishes throughout nearly all the oceans, has maintained progressive growth and is in a strong second position among fishing nations. The United States, once a leader among fishing nations, has recently been displaced by Norway as the fifth largest fish producing nation.

Paradoxically, the United States, the most advanced nation in the world in marine science and in management, has been overtaken by lesser nations in harvesting the oceans. Equipment and boats are old and inefficient, incentives

for fishermen are weak, management has been ineffective, and Government interest has been apathetic. This condition exists in the face of a growing demand for fishery products which is being increasingly met by imports.

The present condition of the U.S. fishing industry will not remain unnoticed. Through legislative mandate, the United States is committed to a national program in marine science dedicated to the benefit of mankind. One of the primary areas to be given special emphasis is a new food-from-the-sea program to combat the growing specter of world hunger. This legislation marks the reversal of our declining interest in the sea.

The challenge of the seas has also been extended to others. The United States has invited all nations to join together in the exploration of the oceans and to tap its wealth and abundance. The objectives of this program have been formally set forth in the International Decade of the Ocean Exploration for the 1970's and presented to the United Nations. There are indications that many nations will respond to this challenge.

This paper will review our national policies toward the exploitation of the seas and particularly those pertaining to fisheries. Since the United States recognizes the need to rehabilitate her fishing industry, the present condition of the fishing fleet and the inclination and the ability of the nation to meet these objectives will be addressed.

The significance of fisheries cannot be appreciated by examining the U.S. industry alone. Thus, the world fishing effort, its full potential, and the influence of fisheries on the behavior of nations will also be discussed.

The value of fisheries as an instrument of national power will also be analyzed. The fishing industries of the Soviet Union and the United States will be placed in parallel to accentuate the differences in national policy. Finally, fisheries will be discussed as a common ground for international cooperation.

## I--NATIONAL POLICIES AND COMMITMENTS

**The Specter of World Hunger.** Unprecedented interest is being focused on the resources of the seas. Technology to exploit them is proceeding at a rapid pace. During the next decade the world quest for scientific knowledge and advances in technology for exploitation of the seas are likely to exceed all previous efforts.

A global awakening to the opportunities of the seas was inevitable. Many land resources required to meet the needs of a developing and growing society are deficient or becoming scarce.[1] Nations must now begin to look beyond the shores for food, minerals, and even water.

Of the vital resources needed by the world population, none are more important than food. Mankind has failed to feed adequately the billions of people now living on earth. An enormous and expanding gap separates ½ billion well-nourished persons from the 1½ billion who are underfed or malnourished.[2]

Recent trends are equally as grim. As a result of widespread drought in 1965-1966, world food production was no greater than the previous year when there were 70 million less people to feed. Large-scale emergency shipments of grain from North America to the stricken areas have reduced grain stocks to their lowest level in over a decade. There is little food left in the granary; nations must now depend upon current production. Thus the world food situation is more precarious than at any time since the period of acute shortage during the aftermath of World War II.[3]

A high-yield hybrid "miracle rice," used on an experimental basis in Vietnam, shows great promise for Asian nations.[4] The agriculture improvement that took place in India in 1968 is mostly the result of planting new high-

yield wheat and rice. Nevertheless, expansion of irrigation and fertilizer use is also required, and some experts think farm output in India has reached a temporary plateau.[5] Superior grain will unquestionably improve the food yield, but it appears too early to arrive at any conclusions as to the impact on the world food situation. In the meantime, any improvement in India's food production appears to be matched by a growing population count.

During recent years the United States has been acutely sensitive to world food problems. This has been demonstrated through national actions and support of international programs. Substantial sums of money have been appropriated, and vast quantities of food have been exported to satisfy world needs. For example, under Public Law 480, a foreign aid program initiated in 1954, approximately $15 billion of surplus food has been sent to more than 130 countries and territories.[6] The successor to this program, the Food for Peace bill passed by Congress in 1966, bears a price tag of $7.4 billion.[7]

Three successive administrations, beginning with the Eisenhower administration in 1960, have taken steps to promote international cooperation and participation as a means of combating hunger.[8] President Kennedy initiated the "United Nations Decade of Development" in 1961. This program, addressed to State Members of the U.N. and the specialized agencies, called for unprecedented cooperation and assistance by developed nations, for sustained self-help by developing nations, and for the assistance of the U.N. in all spheres of economic growth. A salient feature of this movement was the development of measures to eliminate hunger and disease of the less-developed nations.[9]

Unfortunately, no approach yet taken up to that point--internationally, nationally, or cooperatively--has raised food output in underdeveloped countries to the level of food consumption.[10]

At the 1965 midpoint of the U.N. Decade of Development, an evaluation of the progress being made under this program showed dismal results. The poor were becoming poorer, and the rich were getting richer. Moreover, there was every indication that the numbers of people suffering from hunger and malnutrition would be markedly greater at the end of the program in 1970.[11] The goals set for this 10-year period simply will not be attained. It may be more appropriately known as the "Decade of Disappointment."[12]

This finding has been corroborated by other authorities. The President's Panel on the World Food Supply, in reviewing the composite efforts of all the U.S. foreign aid programs, the contributions of voluntary groups, and the years of activity by international organizations such as the International Bank for Reconstruction and Development (IBRD), Food and Agriculture Organization (FAO), and United Nations International Children's Emergency Fund (UNICEF), concluded that "there are more hungry mouths in the world today than ever before in history."[13] Thus, there is overwhelming opinion that national and international efforts to allay the world food problem have failed.

The future looks equally as disturbing. Some authorities contend that massive famines are inevitable and suggest that it is too late to do anything except on a selective basis. It is also predicted that increasing civil tensions, riots, and government instability will accompany the increasing scarcity of food.[14]

This is a reversal of the optimism which existed several years ago. At that time, almost without exception, the rate of increase in food demand was underestimated, and the rate of increase in food production was overestimated.[15] Nevertheless, with this grim shift to realism the United States is committed

to lead the world against hunger, and our national policies support this objective.[16] It is in this setting that the U.S. policy with respect to the exploitation of the seas comes into focus.

**Commitment to the Sea--A National Policy.** The United States is clearly committed to the sea--politically. The Marine Resources and Engineering Act of 1966 provides an explicit mandate for a comprehensive, long-range, and coordinated national program in marine science. Certain portions of this act deserve mentioning. The broad objective of this legislation is "to develop, encourage, and maintain a coordinated, comprehensive, and long-range national program in marine science for the benefit of mankind, to assist in protection of health and property, enhancement of commerce, transportation, and national security, rehabilitation of our commercial fisheries, and increased utilization of these and other resources."[17]

The act also calls for specific courses of action to support these broad objectives. These actions, comprehensive in scope, are addressed to the many deficiencies of the U.S. marine science situation today. It should also be noted that emphasis is placed on the cooperation by the United States with other nations and international organizations in marine science activities when such cooperation is in the national interest.

A commitment to revitalize the maritime industry of the United States has also been made by the new administration. President Nixon has openly supported a national policy to strengthen all elements of seapower, thus "enabling the nation to use the world ocean advantageously for either trade or defense--its navy, its merchant shipping, its shipbuilding, its fishing, its oceanographic research, and its port facilities."[18]

Pursuant to this national policy, the United State has proposed that the nations of the world join together during the seventies in a cooperative program of ocean exploration and exploitation. This program has been designated as the International Decade of Ocean Exploration.[19]

One of the underlying concepts of the decade is that the very size and scope of the marine environment dictate that exploratory effort be conducted on a vast scale if anything is to be accomplished within a reasonable period of time. Hence, a broad program would necessarily require the cooperative effort of many nations. The decade is also envisioned as a first step among nations in developing the future economic potential of the oceans, the base for expanded and more deliberate efforts of the future.

As might be expected, the main thrust of this movement is directed toward material objectives, to develop new sources of food for the developing nations. Concomitantly, there is the idealistic objective that the cooperative effort to use the oceans will serve as a common bond among nations and a force for creating international political stability.

The U.S. commitment to the sea is loud and clear. But how will it compete with the other pressing problems of the Government which are all competing for resources? Aside from the Vietnam drain, which will take precedence, there are several dominant programs that must be considered. These include the Great Society programs, the antiballistic missile system, the outer space program, and the marine resources and engineering development program.[20]

It is extremely doubtful that the national "back to the sea" program will overshadow these competitive programs for resources. Nevertheless, certain aspects of the marine resources program are of sufficient importance to be given early consideration. The world food problem impinges directly on potential of the world fisheries. In view of this grave situation and the direct economic and political import of a strong national

fishing industry, it is difficult to perceive that any other aspect of the U.S. marine resources and engineering program would receive a higher priority.

## II--THE U.S. FISHING INDUSTRY

**U.S. Fisheries--A Distressed Industry.** "We've got to stop fishing like St. Peter."

This admonition, appearing in a double page advertisement in a recent issue of several major news magazines for the nickel industry, reflects the general condition of the U.S. fishing industry.[1]

In an age when the trend of industrial production is solidly upward, the downeast indices of the performance of the U.S. fishing industry are an anomaly. Moreover, this dismal picture of the U.S. fishing fleet has occurred while worldwide catches are being landed at an accelerated rate. For example, while U.S. production has dropped by 10 percent over the past 10 years, the world's fishing production has doubled.[2] Furthermore, the decrease in the U.S. catch has taken place in the face of a steady increase in U.S. demand.

In fact, the U.S. demand for fish is greatly exceeding its domestic capability or will to supply them. Consequently, the importation of fish rises each year. Today, the United States is the world's largest importer of fish--accounting for almost 28 percent of the world's fish imports (i.e., not caught by own fishermen).

Specifically, in 1966 U.S. fishermen accounted for only 40 percent of domestic consumption; foreign imports supplied the rest. The value of these imports was nearly $750 million; a significant sum from the viewpoint of the balance of payment problem confronting the United States today.[3]

Widespread concern and indignation have been expressed over the plight of the U.S. fishing industry--perhaps exceeded only by the reaction to the deteriorated condition of the U.S. merchant marine. A special congressional study of fishery activities behind the Iron Curtain concluded that by comparison with Communist programs "our fishing industry is moribund and on the decline."[4]

The Commission on Marine Science, Engineering and Resources, in response to congressional mandate, recently completed a comprehensive survey of the nation's needs and opportunities related to the sea.[5] After almost 2 years of study, this commission concluded that the United States must make substantial investment in understanding, exploiting, and preserving the oceans. With respect to fisheries, the nation's fishing industry was described "as primitive and inefficient in large part and hampered by overlapping, conflicting, restrictive laws throughout all levels of government." The report was also critical of the nation's dependence upon the large importation of fish to meet its needs.

These conclusions can be clearly and convincingly supported. In the first place, the U.S. fishing fleet is unquestionably old and ill equipped by modern standards. The following testimony made recently before a Subcommittee on Fisheries and Wildlife attests to this fact:[6]

> A 1966 survey of the U.S. commercial fleet showed that of the nearly 14,000 documented vessels, the average age was 20 years, the average length was less than 70 feet, 92 percent had no refrigeration facilities, 84 percent had no hydraulic winches, 77 percent did not have radio direction finders, and 48 percent did not have radio telephones.

Furthermore, there is evidence that little is being done to modernize the fishing fleet, even though a new fishboat construction subsidy has been in effect since August 1964.[7]

The manpower picture is equally as depressing. The number of persons employed in the fishing industry, including

fishermen and shore workers has decreased over the years and has now become stable. Between 1950 and 1960 the fishing labor force dropped from 263,000 persons to 224,000 persons.[8] As of 1966 there were still 224,000 persons employed in the industry.[9] The number of fishermen required before the fishing industry can become a viable portion of the U.S. economy is not known. An annual increase in the labor force of slightly more than 1.5 percent is considered a desirable goal for balanced national growth.[10] Although it is difficult to relate overall goals with those of a single industry, on the basis of a straight line projection an employment level of 330,000 persons as of 1966 would have represented a reasonable growth rate.

The reason for the decline is significant. Unlike agriculture, for example, where technology and productivity have permitted a decrease in labor force on the farms, the technology in the fishing industry has had only a minor role in reducing the number of fishermen. The lag in technology and inability to compete with other sectors of a dynamic economy, including foreign fishing industries, are the primary reasons for this decrease in manpower.[11]

> Continued failure to keep pace with increasing productivity is certain to magnify the manpower problems of most U.S. fisheries. Labor costs will likely continue to rise and the fishing industry will have to improve its efficiency enough to offset the increased costs. Most of the current fishing labor force will remain employed in the fishing industry, rather than take jobs in other industries. However, as these fishermen retire, there will be few replacements and the number of fishermen will continue to decline.

The declining strength of the U.S. fishing industry has a direct bearing on the age and wage level of the fisherman. For example, the U.S. fisherman, as represented by the New England fleet, is considerably older than the average U.S. male worker. Almost 80 percent of Boston offshore fishermen are over 45 years old. By contrast, only 37 percent of the total U.S. labor force is over 45 years old.[13] The average annual earnings of the U.S. fisherman, estimated to be $5,040, is below the national average labor rate.[14]

In discussing manpower problems, it is also appropriate to address certain sociological and environmental conditions peculiar to the industry. Aside from being seasonal and unpredictable, fishing is also difficult and hazardous. Thus, considering the labor market today, there appears little to attract the younger generation to this line of work. Furthermore, minimum wage laws, trade unionism, and other factors that tend to improve earnings and working conditions do not appear to be well established in the fishing industry. This is demonstrated by the fact that less than 10 percent of the fishermen, as a whole, are members of unions.[15]

Thus, the present caliber of the labor force and the inducements of the industry provide little promise for a stronger industry--and a replacement force is not being developed.

Several factors have contributed to the inertia in the U.S. fishing industry. Foremost among these has been the attitude of the Government.

Federal legislation, dating back from the early days of the nation, prohibits the construction of U.S. fishing vessels in foreign shipyards.[16] Although this legislation was designed to help the U.S. shipbuilding industry, it has imposed economic constraints on U.S. fishermen. Today, the cost of fishing vessels built in foreign yards ranges up to 45 to 50 percent of the domestic cost, with no prospect of a more favorable differential.[17]

In addition, the industry is handicapped by certain state conservation laws which are based on economic conditions which no longer exist.[18] Many of these conservation regulations

effectively limit fishing time, nets, and the length of the fishing boats. It has been estimated that because of these conservation restrictions the use of fishing vessels is limited to 25 percent of their full potential.[19] Although this estimate appears to be low and may not be representative of the entire industry, it is clear that archaic regulations adversely affect the efficiency of fishing fleets today.

Other institutional problems, reflecting inadequate Government attention to its fisheries, have been highlighted by the National Security Industrial Association.[20] These include the lack of basic economic research in the field of fisheries, the absence of a close supporting relationship between the Navy and the fishing industry, imposition of unrealistic administrative and safety rules on the fishing industry, and the basic inattention given by the Government to the specialized problems of the fishing industry because of its relatively small size in the total U.S. economy. However, all the troubles of the U.S. commercial fisheries cannot be blamed on the Government. For example, actions to expand markets, increase product quality, and to promote cooperation between segments of the industry are properly within the province of the industry.[21]

It could be argued that it might be to the best interests of the United States to depend upon increasing imports and to let its fishing industry "fade away." Some authorities contend that the interests of the United States and the interests of the whole world will best be served by free trade rather than by protection; and further, that import quotas or other trade barriers would mean higher prices and less freedom of choice for consumers.[22] From an economic point of view this may be a feasible option. As we have seen, there are relatively few persons employed in the fishing industry within the United States, and they account for less than one fourth of 1 percent of the labor force. The total U.S. catch, if replaced by imports, would amount to approximately $500 million,[23] a negligible segment of the economy when compared to the country's gross national product of $673 billion for 1967.[24]

Thus, it could be concluded that from an economic point of view, maintaining the status quo and permitting the continued relative decline of the U.S. fishing industry would not seriously affect the overall interests of the nation.

Nevertheless, certain sectors of the U.S. fishing industry are strong and competitive; notably the tuna, shrimp, and menhaden fisheries.[25] These industries, particularly the tuna and shrimp fishermen managed by large companies and operating on a worldwide basis, have been able to grow in the face of increasing foreign competition.[26] Significantly, the tuna industry, through technology and aggressive marketing practices, continues to grow stronger and thus demonstrates that progress is possible.

This is not to suggest that the U.S. Government has remained totally unresponsive to the continued decline of most aspects of her fishing industry. Recent pressures from the domestic fishing industry have been successful in awakening Government interest and have resulted in concrete action in specific areas.

**Awakening of the U.S. Fishing Industry.** The first significant fishing subsidy construction under the Fishing Vessel Construction Differential Subsidy Act program was authorized by Congress in 1960.[27] Found to be ineffective, this program was replaced by the Fishing Fleet Improvement Act in 1964 which authorizes the Secretary of the Interior to pay up to half of the construction of a new fishing vessel.[28] However, this is only a nucleus for expansion since the

authorization is limited to $10 million annually and then only for 5 years.

Despite a slow start, the prospects of the program are optimistic. During the first 2 years, a total of 37 vessels entered the program.[29] The first American-built factory ship was sponsored under this program. This ship, the *Seafreeze Atlantic*, a 292-foot stern trawler and fishhouse, embarked on her maiden voyage in February 1969. Built at a cost of about $6 million, she represents a new generation of development within the U.S. fishing fleet. Significantly, the *Seafreeze Atlantic* is the first of a fleet of 10 ships that are being built or planned.[30]

In recognition of the need to accelerate the national development of marine resources, the National Sea Grant and Program Act was signed in October 1966.[31] This program, designed to encourage research and development through educational institutions and other institutes, laboratories, and agencies, promises to shape the future of the U.S. fishing industry to some extent. The Marine Resources Act of 1966, which provides the base for the "Sea Grant Program," will also provide a good foundation for the development of related programs. However, it must be kept in mind that the return from such programs must be considered in a long-range context.

Perhaps one of the most encouraging Government programs, recently initiated by the National Council on Marine Resources and Engineering Development, has been the initial effort to apply systems analysis techniques to the U.S. fishing industry. One of the early studies is a systems analysis of trawler operations.[32] The methodology of this study, which resulted in the computation of an optimum fishing system for Boston-based haddock trawlers fishing on Georges Bank, also has application to other fisheries. Interestingly, one of the conclusions of the study was that the use of an advanced and costly fishing system within the current biological and economic constraints of the Georges Bank haddock grounds is questionable and that the present trawlers are more effective.

The United States has made a national commitment to revitalize its commercial fisheries. This nation has also invited the nations of the world to join in a concerted program to develop the resources of the sea--particularly new sources of food.

Despite encouraging signs of progress the U.S. fishing industry, in its present condition and with the Government assistance that is now available, is incapable of responding to this challenge. Thus, timely and substantial Government patronage, far beyond the magnitude and scope of existing programs, must be provided to meet this objective.

As we have seen, several sectors of the U.S. fishing industry have been able to "go it alone." It would be wise to look in their direction for the formula that is needed for a strong fishing program.

## III--SIGNIFICANCE OF FISHERIES

**World Fishing Effort.** The productivity of the world's fisheries is increasing each year. In 1966 the official total world catch of fish, shellfish, shrimp, and other marine life was 56.8 million metric tons--an increase of almost 87 percent over the 1956 catch of 30.4 million metric tons.[1] All told, since World War II the world output has been increasing at the rate of about 7 percent each year. With few exceptions this increase has been shared by all fishing nations. It is estimated that the top 13 major fishing nations account for about 75 percent of the world's fish production. The remaining 92 nations from whom data is collected account for the balance. The major producers are listed in table I.

Today the five major fishing countries are Peru, Japan, Mainland China,

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U.S.S.R., and Norway--in that order. The United States occupies a static sixth position.[2]

The rise in the fish catch of Peru has been phenomenal, increasing from about ½ million metric tons in 1957 to a level that has ranged from 7 to 9 million tons for the past 4 years ending in 1966, a 16-fold increase. Virtually all of this increase is in anchoveta, a small sardinelike fish that is processed into fishmeal.[3]

Production of Japan's far-ranging and highly integrated fishing fleet has remained healthy for the past 10 years and, though outweighed by the tonnage of Peru's catch, exceeds it in value by a factor of 10.[4]

**TABLE I--MAJOR FISHING NATIONS WITH CATCHES OVER 1 MILLION METRIC TONS in 1966[a]**

| | |
|---|---|
| Peru | 8,789,000 |
| Japan | 7,077,400 |
| [b]China (Mainland) | 7,000,000 |
| U.S.S.R. | 5,348,800 |
| Norway | 2,849,400 |
| United States | 2,514,600 |
| Chile | 1,383,500 |
| India | 1,376,600 |
| Spain | 1,357,400 |
| Canada | 1,348,800 |
| Iceland | 1,240,300 |
| United Kingdom | 1,066,600 |
| Indonesia | 1,001,400 |
| Total | 42,353,800 |

[a]Food and Agriculture Organization of the United Nations, *Yearbook of Fishery Statistics, 1966* (Rome: 1967), p. a-12--a-47.

[b]Based on estimate of Jan J. Solecki, *Economic Aspects of the Fishing Industry in Mainland China* (Vancouver: University of British Columbia, 1966), p. 143.

Fishery data has not been available from Mainland China since 1960 at which time its catch was very close to that of Japan and Peru. In the absence of reliable statistics a specific study, sponsored by the Office of Naval Research and the University of British Columbia, was made to determine the output of the fishing industry in China. This survey estimated that production of China's fisheries would probably range from 5 to 7 million metric tons during the 1965-66 period, slightly less than Japan's production during this same period of time.[5]

The activity of the U.S.S.R. fishing fleet has been only slightly less spectacular than Peru's, steadily climbing each year since 1959 to a total of 5.4 million tons in 1966, almost a 100 percent increase over an 8-year time span.[6]

Much farther down the scale is Norway. Displaying a sharp rise over a 2-year period, Norway stands fifth in production at almost 3 million tons.[7]

It should be noted that almost one-third of the current catch is reduced to fishmeal, fertilizer, and other industrial purposes. Fish caught for reduction have been growing at the rate of almost 12 percent each year, whereas fish caught for food have been increasing at a lower rate of little more than 4 percent each year.[8]

**Potential of Fisheries.** A glance at the world's oceans reveals that the distribution of fisheries is extremely uneven. The major fishing grounds are widely scattered between Japan and the Philippines, Greenland and the British Isles, and in the Pacific waters bordering Chile, Ecuador, and Peru. Moderate fishing activity takes place in the northern Atlantic and Pacific off Canada and the United States. By contrast, the remaining major waters, particularly those surrounding the whole of Africa, the east coast of South America, and the west coast of Mexico and the United States are inactive.

Moreover, the distribution has been changing, notably because of the productivity of the southeastern Pacific waters. Virtually unknown 10 years ago, the fish from the Humboldt Current now account for one-fifth of the world's

total tonnage. This increase overshadows the catch from all other fishing grounds except those waters contiguous to the U.S.S.R.

Despite the generally accepted belief that the oceans are a source of unlimited wealth, its resources are widely scattered, forming not only the rich fishing grounds noted above but also certain barren areas almost devoid of fish. The fertility of the seas and the corresponding location of fisheries are dependent upon a number of factors such as light, nutriments, temperature, and movement of water. The conditions within a marine ecosystem are discernible to biologists and through analysis form a basis for predicting the potential productivity of specific areas of the oceans.[9]

The estimates of the potential yield of the world's oceans vary widely. Various scientific estimates range from 100 million to 2 billion metric tons of fish per year, which is 2 to 40 times the current world catch.[10] Actually, the yield depends upon the nature of demand. If certain species are in great demand, it is reasonable to expect that output would be limited. On the other hand, if demand patterns shift to anything that swims the yield would be greatly increased.[11]

On the basis of known fishery resources, Schaefer concludes that, at a conservative estimate, the world fishery production could be increased to 200 million metric tons per year with present fishing equipment[12] and with no radical developments, such as fish farming. This is approximately 4 times the present fishery harvest.

In a further analysis of the productivity of the sea in relation to the food requirements of 6 billion people (the earth's projected population at the end of the century), he is confident that the potential yield of the sea is easily adequate to satisfy man's total protein requirement and that for animal protein alone the potential yield is between 8 and 34 times the estimated requirement. This requirement is based on a per capita diet of 2,500 calories per day, 80 grams per day of total protein, and 15 grams per day of animal protein. The most critical element of the human diet is animal protein.[13]

However, William and Paul Paddock, in their grim analysis of the earth's inability to feed its future population, predict that "for the foreseeable future food from the seas will never catch up with the protein needs of the expanding population."[14] This is, of course, a reflection of our present incapability to harvest the seas rather than their potential yield. Nevertheless, they see promise in the use of fishmeal as a food additive within a decade.

Potentially, one of the greatest benefits of fish is its value as a source of fish protein concentrate (FPC). FPC is a protein-rich powdered food additive that, through chemical processing which removes the oil and water, can be made from otherwise undesirable fish or trash fish. Another value of FPC, in addition to the possibility of its being produced at an extremely modest price, is that the entire fish can be used. It is estimated that the entire world's requirement for protein in 1970, over and above what is provided by the catch for fishmeal and food, could be met with an additional catch of 20 million tons--an increase of 35 to 40 percent over today's catch. The development of FPC offers tremendous opportunity for the world's fisheries.[15]

If we do not know how many fish are in the sea, neither do we know where they are--except in a general sense. The location of coastal areas of productivity and the major fishing grounds are generally known. The fishing grounds of the Southern Hemisphere, while relatively untouched, have been located by scientists. However, much less is known about the location of potential high seas pelagic fisheries (surface feeding fish such as the herring,

anchovy, menhaden, tuna, and salmon).[16]

The Benguela Current off the east coast of Africa has been compared in potential to the rich Peruvian (Humboldt) Current.[17] However, production from this area amounted to less than 2.5 million metric tons in 1966 which suggests that much more exploitation of these waters is possible.[18]

In summary, all nations are depending more each year on fisheries to meet their food and industrial needs. However, despite these increases in demand, the resources of the sea are largely unutilized and can contribute significantly more toward meeting the nutritional needs of the world.

**Framework for Analysis of Fisheries.** Having looked at some general dimensions of fisheries in terms of participation, production, and potential, what is their significance? That is, why do nations fish, and what is the influence of fisheries on the behavior of nations?

An economic, political, and scientific approach provides a broad structure for further discussion of their importance. However, a more precise classification under these general headings will be helpful.

Douglas M. Johnston, in drawing up a framework to analyze fishing disputes, considers health and wealth as the two primary objectives of fishing. Essentially, these are economic values. He also reasons that power and respect may be gained through fishing activity. These are political values. To secure these objectives he submits that it is necessary for the fishing industry to have scientific knowledge and to be technologically efficient.[19]

This composite framework will be followed in reviewing the importance of fisheries.

**Economic Importance of Fisheries.** As discussed in chapter 1, the fight against hunger and disease is one of the national objectives of the United States. Thus, in a word, health is indeed an objective of our foreign policy as well as the cornerstone of our future fishing program. Furthermore, serious efforts are being made by this country to produce FPC--the most promising means for satisfying the protein requirement of underdeveloped nations.

Health is also the primary goal of the fishing programs of the major Communist countries. We have seen the revolution that is taking place in Soviet fisheries. Fish have been given a high priority to improve the Russian diet because of the inability of agriculture to fully meet their protein requirements. Under the present 5-year plan (1966-70), the Soviets intend to increase their fishing production by 50 percent to 8.5 million tons by 1970--which would likely make the U.S.S.R. the world's leading fishing nation.[20]

The Chinese Communist government, confronted with even a larger task of feeding an exploding population, is making every effort to expand its fishing industry. Soleeki concludes that China must rely on aquatic products and imports for food, since it is very unlikely that China will be able to solve the food problem through increased agricultural production.[21]

The economic importance of fisheries varies among countries. For instance, in Iceland, which is at one extreme, fish account for about 90 percent of the country's exports. About 25 percent of the gross national product is derived from fisheries, which is approximately 5 times more than any other country.[22] However, in terms of overall production, Iceland's catch in 1966, the highest in her history, was only 2 percent of the world's catch.

Peru's fisheries are also of major importance. During the last 10 years the total catch has increased nearly 27 times, from 320,000 tons to almost 9 million tons. Fishmeal exports are an essential industry, accounting for 27

percent of total exports in 1965, the year of her heaviest catch, and surpassing copper as the traditional main export.[23] Significantly, little, if any, of the fish protein is utilized in the diet of Latin Americans.[24]

The contribution of fisheries to the economic strength of Japan, Canada, and Norway is also substantial, ranging from 12 to 18 percent of their total world exports.[25] But, as discussed in chapter II, the economic significance of fisheries in the United States is relatively less important than in other major fishing nations.

From the foregoing it is clear that fisheries are of vital importance to the national economies of most fishing nations even though they may not reach the dominant proportion of the fishing industry in Iceland.

A word should also be said about the potential of fisheries and the emerging Third World nations. On the basis of a recent survey sponsored by the National Council on Marine resources and Engineering, an organization within the Executive Office of the President, it was found that with few exceptions the fishery resources of most underdeveloped nations were sufficient to meet local food needs. The survey also confirmed that the capital and technology necessary for the development of effective fishery industries were uniformly lacking. Nevertheless, governments were generally aware of the potential of fisheries, and some had taken positive steps toward supporting a fishing program.[26]

A separate United Nations study of the fishing industry in the Arab countries confirms that fishing wealth abounds along their coasts and recommends the encouragement of a cooperative fishing program to increase the living standard of these low income countries.[27]

Thus, it is apparent that economic force, whether in the form of health, wealth, or a combination of the two, is the primary incentive behind national fishing efforts and will be the main motivation for future development of fisheries.

**Political Value of Fisheries.** The subsidiary political values of fisheries, power and respect, are more difficult to assess. However, they can be given some dimension.

The concept of power implies the means to achieve an objective and thus may be viewed as a threat to other nations security or interests. For example, the presence of Russian trawlers off the coastal waters of the United States, although fully within the strictures of international law, is viewed with alarm by the United States.

Reacting to what they consider to be another kind of threat, Chile, Ecuador, and Peru expanded their sovereignty 200 miles off their respective coasts to protect their fishing grounds against economic encroachment.[28] Conflicts caused by fishing within these waters have resulted in the seizure of U.S. vessels and continue unabated each year.[29] In order to ameliorate international tension, U.S. legislation now permits the reimbursement of U.S. fishermen for losses resulting from seizures in these waters.[30]

International conflicts, including wars, over fishing practices and rights are a part of world history. On the other hand, it is noteworthy that through bilateral and multilateral agreements and the establishment of international organizations, conflicts have been reduced.[31] Nevertheless, with the increasing competition among fishermen and in view of the higher stakes involved, the opportunity for conflict among nations is certain to increase.

Prominence in fishing, as in other maritime endeavors, creates national respect and prestige. It is certain that the U.S.S.R. has gained political prestige through the development of a modern and efficient fishing industry. Interest-

ingly, the numerous hearings before the congressional committees and subcommittees on the neglect of the U.S. fishing industry emphasize the low state of national prestige as much as the economic problem of the fishermen. The militancy of Chile, Ecuador, and Peru in defending their fisheries against stronger nations is, in part, a reflection of their newly acquired stature.[32] Fishery claims made by South Korea and Indonesia have also been based on a desire for higher prestige.[33]

Spanier, in his discussion of world politics, observes that smaller nations with no significant power potential seek prestige out of their concern for self-respect. Thus, the nations that cannot explode an atomic bomb or launch a space missile may seek some measure of international recognition and prestige through an aggressive fishing program.[34]

**Science and Technology--Foundation of Progress.** International competition for fish is matched by the international effort to gain knowledge about the oceans. In this regard, Johnston postulates that the success of fishing industries depends upon two values: knowledge and efficiency. He explains that knowledge stems from marine science research and that efficiency in the fishing process is the product of technology.[35]

Research in ocean sciences, motivated primarily by defense needs, has reached unprecedented levels. The United States and the U.S.S.R. are the leading nations in the field of oceanography and have attained approximate parity in this field. However, the quality and emphasis of Soviet research in support of fisheries exceeds that of the United States.[36] Chapman contends that in the past 10 years the Russians have done more toward the application of modern science and technology to ocean fishing than ever before and that all other major nations are intensifying and expanding their long-range fishing capabilities.[37]

Interests in marine science know no national borders and are shared by scientists all over the world. For example, during 1967 the Directorate of Fisheries Research in Great Britain had numerous scientists participating in a wide variety of international meetings and working abroad and was visited by representatives from 10 nations, including Poland and the U.S.S.R.[38] This is illustrative of the universality of marine science endeavors.

The fishing process today is basically the same as that of the earliest fishermen; that is, fish are still hunted and caught from independent boats with nets and hooks. However, substantial technological improvements have been made in gear, transportation, and preservation.[39] There are two major trends in technology that are significant. One is the increased use and development of fleet operations, that is, the use of organized and centrally controlled fishing fleets, pooling their knowledge and techniques, primarily by the Japanese and Russians. The other is the worldwide extension of effort, supported by the use of large factory ships.[40] These advancements have not yet reached most of the low income nations which are still dependent upon traditional processes.

From the above it is clear that significant progress has been made in marine science to benefit the fishing industry. Nevertheless, no quantum advancement has been made. There are many important areas of ocean research useful to fisheries which are not understood. These obscure areas include air-sea interactions which directly influence fish productivity, the nature of the thermocline, internal wave action and bottom temperature and their effect on fish concentrations, fish behavior and migration, and a number of other complex phenomena which will require a higher level of effort and cooperation

than is now available.[41] Further, the ultimate technology needed for efficient fishing--which would provide for controlled farming and systematic bulk harvesting of fish and would replace fishing as it is known today--is still far away.[42]

**Significance of Fisheries--A Summary.** In summary, it can be seen that economic, political, and scientific aspects of fisheries are highly interrelated and that an overall assessment of the importance of fisheries to nations cannot be based on the dominant economic values of health and wealth alone, but must include the political considerations of power and respect. In addition, it is also clear that the level of national interests in fisheries is dependent upon progress in science and technology. Thus, a national commitment to world prominence in fishing necessarily implies a heavy involvement in international politics and its attendant benefits and problems.

## IV--OCEAN FISHERIES AS AN INSTRUMENT OF NATIONAL POWER

**National Power Defined.** Holsti, in his analysis of international politics, defines power as "the means by which all states influence the behavior of others so as to protect and extend their own interests." He also explains that when the actions to gain or defend these interests take on a pattern and are directed toward some specific objectives or values, they constitute a foreign policy.[1]

The extent to which a nation influences another, of course depends upon its capabilities, that is, its strength. Political textbooks abound in comparative data relating to demographic, geographic, and economic "elements of power." They also emphasize that less materialistic elements such as a nation's history, its temperament, and its attitude may be a better gage of its actual influence.

In turn, the influence of a nation may be exercised in various forms, including the offer and granting of rewards, the threat and imposition of punishments, and the use of force. Nevertheless, the main thrust of this academic discussion is that in international politics we are interested primarily in one process: How one state influences the behavior of another in its own interest.[2]

How then do the fisheries of the United States fit into this discussion?

Perhaps the best way to think of fisheries as an instrument of foreign policy is to first see how they are being used in this capacity by other nations. We need look no further than the Soviet Union. Accordingly, let us proceed to review the Soviet fishing industry and its political, economical, and military influence.

**Soviet Fisheries as an Instrument of National Policy.** The Soviet Union is committed to the growing exploitation of the ocean's fisheries. This expansion is not subject to the vagaries of marketing conditions, but is geared to the attainment of the specific goals and quotas of authoritative and ideological planning.

For example, the Seven-Year Plan of the Soviet Union, which provided the foundation for the spectacular growth of fisheries during the years 1959-1965, was to: "Represent a decisive step towards the creation of the material-technical base for Communism, and also towards the fulfillment of the main economic task of the USSR--to catch up with and to overtake the most highly developed Western States which have the highest production rate per capita."[3]

A new Soviet Five-Year Plan (1966-1970) for the development of the fishing industry was adopted in April 1966. This plan provides for a 50 percent increase over the 1965 fishery landings or a total of 8.5 million tons by

1970. Up to 90 pereent of this eateh would be from the high seas.[4] Thus, within the next few years the Soviet fishing program is likely to be the largest in the world.

A more reeent eongressional study eoncerned with the changing strategie naval balance between the U.S.S.R. and the United States eoneluded that "the Soviet fishing fleet clearly reveals the U.S.S.R.'s goal of domination at sea." Whatever one may think of this evaluation, the report also indicated that sinee 1954 the Soviet Union had invested 4 billion rubles in its fishing fleet and fishing industrial facilities ashore.[5] By way of general eomparison, the total U.S. investment in fishing eraft and shore facilities for proeessing the fishing harvest totaled about $1.4 billion in 1964.[6] In this regard, the position is held by some that the Soviet Union has already all but won the battle of the fishing grounds.[7]

There are a number of political spin-offs from Soviet prominenee in ocean fisheries. They aetively participate in international oeeanographie organizations which provide an opportunity to keep abreast of scientifie developments as well as to gain prestige in the ocean community.[8] Their seientifie advancement and far-ranging operations have also given them many opportunities to provide teehnieal assistance to a number of less-developed countries. In addition to holding training courses in the Soviet Union for foreign representatives, large fishery development projeets have been offered to many underdeveloped countries; and trade agreements for the sale of frozen fish have been made with a number of countries in Afriea.[9]

From the above it is apparent that the Soviet Union is reeeiving substantial political dividends from its investment in fisheries.

The growth of Soviet fisheries has affeeted the eeonomy of other fishing nations. For example, in 1960 one-half of Iceland's fishery revenue came from the Soviet Union and satellites. Within a year, beeause of Russia's increased fishing effort, exports from Iceland were redueed by half, requiring Iceland to find new markets for $5 million of fish products. This situation, eoupled with a slump in Iceland's 1963 cateh, had ereated a $10 million adverse trade balanee--a sizable problem for a small nation.[10] There is no indieation that this was a discriminatory action. Nevertheless, there is evidence of deliberate harassment of Norwegian fishermen in the Barents Sea whieh foreed them to use less fertile fishing grounds.[11] Further denial of fishing waters eould take plaee at any time. As for other areas, a reeent economie survey of South-West Afriea, for example, warns that the whole future of their fishing industry is being increasingly threatened hy the aetivities of trawlers and faetory ships from non-African eountries just outside territorial waters.[12] One observer contends that the Soviet Union is aiming to apply great eeonomic power by eornering the world's fish. He notes, however, that the Russians will remain the primary eonsumers and that, in view of their dependenee on these resources, every effort will be made to guard against irrational depletion.[13]

It does not appear at this time that the Soviet fishing effort is direetly engaged in expanding activities as a weapon of eeonomie warfare. The fact that advanced Soviet fishery technology provides an advantage over others can hardly he eriticized, but their exploitation of eoastal fisheries whieh serve as the resource hase of less-developed eountries may be questioned.

Mueh has heen written about the military value of the Soviet fishing fleet. It is probably true that the Russian trawler is the most versatile, if not the most valuahle, ship on the bigh seas today from the viewpoint of Soviet seeurity. Operating under the proteetive umbrella of international law, many of these ubiquitous ships are the eyes and

connecting data links to Soviet naval intelligence. They are also a constant reminder of Soviet presence. Aside from intelligence and communications roles, the Soviet fishing fleet, with its wide variety of ship types ranging up to whaling and factory ships of U.S. tender size, lends itself to almost every conceivable naval mission. In the main, the fishing vessels with their sea keeping qualities and configuration have obvious potential for mine warfare and ASW effort.

The utilization of fishing vessels for paranaval operations also provides experience and training and creates a close relationship between naval forces and the fishing fleet. Thus it is self-evident that the Soviet fishing fleet is an invaluable adjunct to Soviet naval forces.

In view of the foregoing, it is clear that the Soviet fishing industry is an effective Communist instrument of power and that an immense task is facing Russian fishermen as a consequence of policy so employing it. This power is manifested today by one of the world's largest and most modern fishing fleets, the use of flotilla operations and specialized fishing vessels, aggressive and complementary research programs, and worldwide operations. A most formidable combination!

**Projection of U.S. Fisheries as an Instrument of National Policy.** At this point it would be only natural to be fearful of the influence of the Soviet fishing industry. However, there is a redeeming factor: the United States has the industrial and technical elements of power to build the world's largest and most modern fishing fleet if needed. And as we know, there are still plenty of fish in the sea. How then would a strong U.S. fishing industry of comparable capability serve the interests of the United States?

Since the U.S. commitment to fight world hunger is now a major objective of foreign policy, it is appropriate to look at the value of a strong fishing industry as an instrument of foreign aid--foreign aid being regarded as a principal instrument of our foreign policy.[14]

It is not suggested that the United States attempt to ship massive quantities of fish products to starving nations. This is an obvious impracticability even if the capability existed. The most efficient and economical means of distributing fish protein is in the form of fish protein concentrate (FPC). The United States has made substantial technical progress in processing FPC and is ahead of the Soviets in this field.[15] The 89th Congress has passed legislation which would authorize the construction of one demonstration plant and the lease of another plant for such a program.[16] The initial objective of the program is to provide sufficient quantities of FPC by 1971 to meet the protein needs of at least 1 million people.[17] A long-range FPC program with necessary fishing vessels, processing plants, and related technical know-how exported by the United States and operated locally on a self-improvement basis has considerable merit.

In this regard, in a recent examination of the industrial and economic opportunities of the oceans, the most promising area in the biological field was considered to be in food processing. The analysis also predicted that some form of Marshall Plan to optimize the world's food resources was inevitable.[18]

A fishing industry is a good choice for the development of poor countries. In addition to providing food, it also stimulates the growth of subsidiary industries such as boatbuilding and repair facilities, processing and storage plants.[19]

H.E. Crowther, Director, U.S. Bureau of Commercial Fisheries, states that the potential yield in areas fished by the United States has been estimated as high as 10 times the present production of the U.S. fishing fleet. U.S. use of domes-

tie waters as a proving ground for world hunger is an alternate and perhaps more satisfactory initial approach to this problem.[20] In fact, this is probably the best approach for an early breakthrough in the FPC race with malnutrition.

Thus, in terms of foreign aid, a strong U.S. fishing industry would be an effective force in allaying world malnutrition, and U.S. material and technical assistance to fishing industries would provide the means for constructive development of less-developed nations.

The overall contribution of U.S. fisheries to the domestic economy has been discussed earlier. In comparison with other industries it is not impressive. Nevertheless, a competitive U.S. fishing industry could seriously affect the economies of large exporters, many of whom have received U.S. grants to improve their fisheries. However, with the growing demand for fish, markets for foreign products could presumably be found elsewhere if necessary. Ironically, the United States gave the Russians $20 million worth of fishing vessels and equipment in World War II and was instrumental in developing their fishing fleet.[21]

The adverse effect of the importation of fish on the U.S. balance of payment problem deserves special mention. The total balance of payment deficiency in fishery has been estimated to be $500 million.[22] Continuing dependence upon imports without corresponding reduction in other areas will add to this imbalance.

The extent to which large imports weaken the economy of the United States is not addressed in this paper. A strong U.S. liberal trade policy has contributed to economic growth and to a higher standard of living. This policy is likely to continue.[23] Nevertheless, a fishing industry, capitalizing on the full potential of U.S. technology and operating with the same degree of support provided to foreign fleets by their governments, is almost certain to be competitive in many types of fishing activity.

We have seen the paranaval value of the Soviet fishing fleet. Many of the same benefits would accrue to the United States.

The value of a Soviet intelligence-gathering trawler may not be fully appreciated until looked at from the standpoint of the *Pueblo* fiasco. Soviet intelligence gathering trawlers do not carry the sovereignty and prestige of their country on their sleeves as do the ships of the U.S. Navy performing identical missions. Now there is talk about giving intelligence-gathering ships of the United States improved protection.[24] Better to have an innocuous trawler apparently manned by civilians than to create international crises that embarrass national honor and jeopardize world peace under such circumstances.

There are now some 380 submarines in the Soviet Union of which 50 are nuclear powered. These submarines, distributed around the perimeter of the Soviet mainland and concentrated in the Arctic and Far East, are the main strength of the Soviet Navy.[25] It is not clear whether the United States has the means to counter this threat. There are indications that although present ASW capabilities will be adequate for some period into the seventies, they are leading toward a plateau of effectiveness, and they will be overshadowed by submarine effectiveness by the late seventies, unless improved.[26] The advent of the true submersible nuclear-powered submarine requires a different ASW doctrine than that of World War II. Very sophisticated defense and detection measures of global dimensions must be employed to cope with this threat.

Projecting a level of technology that is available today, the typical fishing vessel of the future will have sonar and TV equipment to search for and classify fish schools on the high seas--much the same equipment, knowledge, and skills

reqnired to locate snbmarines. These ships will also have modern commnnications, navigation, and radar equipment needed for long-range operations. Moreover, studies have snggested that small, compact nuclear power plants for fishing vessels are not far away.[27] The use of a modern purse seiner as a link in a widespread ASW system may be justified even on a cost effectiveness basis.

Dnring World War II about 250 fishing vessels were reqnisitioned and turned over to the Navy for use as minesweepers, patrol vessels, and gunboats.[28] Under the Fishing Improvement Act of 1964, the plans of fishing vessels that are bnilt with Government assistance must be reviewed for defense features hy the Navy Department. Although the defense requirements are very broad, specifications could be drawn up to meet specific defense needs. Thus, an expanded fishing fleet with military specifications would be of significant value dnring mobilization.

There are many other naval missions that can be performed by fishing vessels. The United States can no longer afford to ignore the advantages to be gained from the interaction of a strong fishing fleet and Navy.

It has been suggested that America's main role in fishing may be to export know-how and use domestic fishing as a proving ground to solve world hunger.[29] This opinion is generally consistent with the thoughts of this paper. However, a modern fishing fleet carrying a U.S. flag would represent a significant increase in defense strength at a nominal investment.

In conclusion, a strong U.S. fishing industry would be an effective instrument of foreign aid, would add leverage in projecting U.S. interests in international politics, and would increase U.S. defense effectiveness on the seas.

**Epilog: Ocean Fisheries and International Stability.** The value of the sea as a means of promoting international cooperation appears to be almost nniversally accepted by serious writers on the snbject. This optimism exists in the face of increasing competition among nations on the fishing grounds and a growing tendency to secure exclusive jurisdiction over what has traditionally been a common property resonrce.

Indeed, nations are finding ways to avoid conflict. For instance, to overcome restrictions in fishing off foreign coasts, the Japanese fishing industry has invested in joint ventnres with other countries. About 25 joint ventures were in effect in 1965 in Central and South American conntries and in Southeast Asia.[30] A joint American-Cameroon venture to develop a shrimp indnstry in the coastal waters of Cameroon has been undertaken along similar lines.[31]

As mentioned earlier, the Soviet Union has been very cooperative with other nations in matters relating to fisheries. Russian scientists and administrators participate actively in international agreements, conventions, and organizations concerned with research and regulation. The Soviet attitnde in this regard is an important factor in maintaining order, developing cooperation, or otherwise influencing fishing nations.

The theme of the Second International Oceanographic Congress of the U.N. Educational Scientific and Cultural Organization (UNESCO), hosted by the Soviet Union, was "Research on the Ocean for the Good of Mankind." This effort has resulted in increased interchange of scientists and information between the United States and the Soviet Union.[32]

The main thrust of the International Decade of Ocean Exploration proposed by President Johnson in May 1968 is to create international stability through joint ventures of many nations. The development of ocean fisheries is one of the major collaborative areas in this program.

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Important international fisheries have been preserved for years through the actions of international commissions. For example, the International Convention for the Northwest Atlantic Fisheries, established almost 20 years ago, has 13 North American and European members, including the Soviet Union.[33] There are 14 fisheries commissions concerned with every form of marine life from shrimp to whales.

The United Nations is also involved in ocean fishery programs. The Food and Agriculture Organization (FAO) of the U.N. collects data, publishes fishery statistics, and administers far-reaching programs for the development of fisheries in underdeveloped countries.[34]

The need for international rules for dealing with conservation of high seas fishery resources has been codified in the Convention on Fisheries and Conservation of Living Resources. This Convention has done much to provide precedents and standards for bilateral and multilateral agreements.[35]

We have looked in on just a few of the efforts and developments that illustrate the positive relationship between fisheries and international cooperation. Of course there are other transactions, so to speak, that would appear on the other side of the ledger. But on balance the picture is favorable.

In a word, one of the great promises of the ocean fisheries, in addition to their future role in countering world hunger, is their potential value in exacting the cooperation of nations as a prerequisite for the full exploitation of their resources.

## V--SUMMARY AND CONCLUSIONS

We have discussed many aspects of ocean fisheries. This final chapter will attempt to summarize some of the salient points of these discussions and to arrive at some brief conclusions as to their significance.

World hunger is a fact of life. Many programs have been initiated by the developed countries of the world to combat this threat. All have failed if we count the growing number of hungry people still in the world. However, none of these campaigns have utilized the resources of the sea. Nations are now exploiting these resources, and a new dimension is being added to the world protein larder. Ocean fisheries can and will make a major contribution toward relieving the world hunger problem.

The United States has made a national commitment to combat world hunger through a food-from-the-sea program and has decided to revitalize its sick fishing industry to meet this commitment. Some progress has been made in this direction, but the results to date are only of token value. Despite Government support there is little promise that the fishing industry can compete with other enterprises in the investment world. Further, there is major inertia to overcome in the industry itself. It is concluded that the fishing industry in its present condition and with the Government assistance programs now in effect cannot and will not meet the policy objectives of the United States.

Under the concept of the Decade of Ocean Exploration, the United States has asked all nations to join together in an effort to assist underdeveloped nations and to combat malnutrition. Historically, programs of this type, though profound and stirring, rarely do what they are supposed to do. If this program is to succeed, the United States must take the dominant role toward its implementation. Furthermore, such action is probably the only means of stimulating the development of a viable U.S. fishing industry.

The world fishing effort is expanding at such a rapid rate there is much concern over the depletion of fishery resources. Although the estimates of the potential yield of ocean fisheries vary widely, there is every indication that there are sufficient fish in the sea to sustain man's most ambitious fishing

efforts. Yet, to gain the most benefit from these fish, they must be reduced to a more durable and economical form such as fish protein concentrate (FPC). The future success in meeting the nutritional needs of the underdeveloped nations will be largely through the use of FPC.

Nations fish mainly for money and food. Nevertheless, there are other benefits. Several Third World nations have discovered that possession of fertile fishing grounds or a high-performance fishing fleet will also give them international attention and prestige and with reasonable investment. The bonus of power and prestige will serve on an extra incentive for these nations to develop or strengthen a national fishing program.

Science and technology are the companions of a modern fishing industry. Substantial progress is being made in fishery oceanography. Yet, the fishing process today, a game between hunter and quarry, is a generation behind in technology. In the final analysis, a technological contest over fisheries would be between the United States and the U.S.S.R. The U.S.S.R. is ahead and is likely to remain ahead in this department barring a spectacular challenge by the United States.

The Soviet Union fishing program is a deliberate tool for advancing national interests, and their fishing fleet is the largest and most modern of all nations. The Soviets, capitalizing on the common property resources of the oceans, have made rapid and important economic, political, and military gains and will continue in this direction.

The United States has not elected to follow this route in the economic race with the Soviet Union. In fact, over the past two decades the fishing industry, allowed to fend for itself, has been relegated to the position of a minor industry. There is now a gradual awakening to the importance of this option. It is unlikely that any momentous change will take place in the economy as a result of a change; the typical U.S. citizen simply does not have a hunger problem. Nevertheless, as we look back on the serious food trouble the underdeveloped world is experiencing, a strong fishing industry has great promise as an instrument of foreign aid.

The Soviet Union operates trawlers openly. The United States should have no compunction about employing fishing vessels for the same purpose. Furthermore, the United States can no longer afford to ignore the importance of modern fishing ships as an adjunct to its naval forces. In short, ocean fisheries offer the United States a means to regain the initiative in international affairs that has been forfeited to the Soviet Union.

There is increasing opportunity for conflict on the fishing grounds, and much more is at stake than before. The organizations and means created for international understanding and regulation of fisheries will also be harder pressed than ever before. Many small nations, attempting to reconcile these problems by extending their sovereignty onto the high seas, are adding to the problem. Fortunately, many others,

## BIOGRAPHIC SUMMARY

Capt. John T. Robison, SC, U.S. Navy, did his undergraduate work at the University of North Carolina and did advance work in the field of management at the U.S. Naval Postgraduate School, Monterey. As a supply officer, he has had considerable experience in the field of logistics, and his most recent assignments have been as Supply Officer in the U.S.S. *Oriskany* (CVA-34), 1963-65, and as head of policy review at the Naval Supply Systems Command, Washington, D.C., 1965-68. Captain Robison is currently a student at the Naval War College, School of Naval Warfare.

including the Soviet Union, advocate an open-sea policy and are pursuing a course for the rational and shared use of ocean resources. Ocean fisheries will always be a source of conflict. On the other hand, by their very nature, they provide a means for nations to negotiate and settle their differences on a common ground. In this regard, ocean fisheries serve their most important role: that of national instruments for international stability.

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Ψ

Whosoever commands the sea commands the trade; whosoever commands the trade of the world commands the riches of the world, and consequently the world itself.

*Sir Walter Raleigh: Historie of World, 1616*

# THE DEEP SEA RESOURCES

A research paper prepared by
Colonel John D. Lewis, U.S. Army
School of Naval Warfare

*The riches of the deep sea are still largely in the imagination of man, but there is sufficient information on resources available to stimulate their exploration. To ensure that there will be a measure of order in the extraction of this wealth, a viable regime of the deep sea must be developed. While a workable regime must be based on sound geophysical and economic facts, any negotiation of an international convention on the deep ocean must necessarily be of profound interest to the military planner.*

## INTRODUCTION

The seabeds and ocean floors have recently been thrust into the international arena by a Maltese proposal that the United Nations assume jurisdiction over this new frontier.[1] The proposal made in 1967 by the Maltese Representative included a second requirement: that the resources to be found on the seabed and subsoil should be reserved for all mankind.

Suddenly, nations, even those completely landlocked, could see the possible benefits of such a proposal. The mere statement of this proposal also revived some longstanding questions about "freedom of the seas" and military use of oceanic areas. As well, it highlighted some newer problems, such as the economic exploitation of the seabed and ocean subsoils and the determination of the control of these resources. This paper examines the deep seabeds and ocean floors beyond the Continental Shelf and inquires into the state of oceanology, with regard to the exploration and exploitation of these resources. It aims thus to provide a basis for evaluating between political, military, and economic factors, including an examination of the legal arrangements applicable to the regulation of these interactions as well as of those combined effects upon future military and political planning for the United States.

## I--THE SEA ENVIRONMENT

Man has only charted 5 percent of the ocean floor[1]--even though there is no known point more than 7 miles below the surface of the sea--while in outer space he has successfully mapped

and charted the hidden side of the moon. True, this land is covered by tons of water and often described as a hostile no-man's-land. Several years ago Rear Adm. John S. Thach, speaking of the hydrospace environment of this planet, described it realistically:

> . . . right off our doorsteps is a relatively unexplored jungle; whole mountain ranges, deep canyons, and many strange creatures are hidden there beneath millions of cubic miles of sea water. This liquid space, about which we know so little, is a murky mass of discontinuities, full of sound ducts, current, and thermal layers. Most incredible of all is the noise racketing through the undersea jungle.[2]

Of this three-dimensional ocean space, only the surface and a small portion of the top layer have been used until recently. Today, the seabed and subsoil of the deep ocean floor are being assaulted as the last frontier on this planet. With respect to the distribution of this ocean space, the Continental Shelf Convention defined the limit of the Continental Shelf as being out to the 200-meter depth line. The limit, however, was made an elastic one, for the Convention added: or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of resources.[3] The boundary between the Continental Shelf and the deep ocean is a transitional area called the continental slope. From the shoreline out to where the continental slope begins, the ocean is shallow; but once the continental slope is reached, the sea floor plunges downward to 2,000 meters, 3,300 or even 7,000 meters. The continental slope is really the boundary or wall enclosing the deep ocean. Many geologists describe the Continental Shelf as part of the land with the continental slope as the shores of the deep ocean. It is the deep ocean, covering 65 percent of the earth's surface, that is the primary concern in this paper.

The relief features of the ocean floors are similar to those found on land with much greater topographic extremes. Although there are large areas that are flat, modern echo-sounding techniques and underwater photography reveal deep troughs, major submarine mountain chains, and tall, isolated mountains with both steep and gentle slopes. According to one geologist, about 80 percent of the oceans consist of broad elevations and depressions at depths of 3,000 to 6,000 meters.[4] The areas formerly described as "plains" are getting gradually smaller on charts of the ocean, as more and more detail becomes known.[5] The ocean basins are separated by long mountain ranges such as the Mid-Atlantic Ridge which runs the entire length of the Atlantic Ocean. In places the mountaintops rise to form islands, while in other locations seamounts are the predominant feature. The Pacific Ocean contains thousands of seamounts which rise from the seabed several kilometers. In some locations sediment layers cover the ocean floor to depths of 700 to 1,000 meters. The sediment consists of silt and remains of sea creatures that have drifted to the bottom of the sea over the past millions of years. Close to the shore these sediments, or mud deposits, accumulated from large drainage river systems. In deeper water the dominant sediments consist of oozes and clays with various chemical compositions.[6] This cover could mask many irregularities to produce the often described flat surface of the seabed. In other areas of the ocean, for instance between Tahiti and Mexico, the sediment is nonexistent.[7] The thickness of the earth's crust on the ocean floor is only about 3½ miles as compared with 12 to 32 miles on land. This difference has enticed scientists to look to the sea as a quicker way to reach the earth's mantle.

A knowledge of the deep ocean environment is essential to the understanding of the problems concerning the economic, political, or military significance of this area of the globe. It is

wholly unlike any other part of the globe and is marked by one special feature: its dynamic nature.

## II--EXPLORATION OF THE DEEP SEA

The methods used to explore the deep ocean floors and subsoil are as diverse as its terrain. In a sense it is a revolution of ocean technology: first, in adapting man and machinery to the fairly easy tasks of the Continental Shelf; and second, extending this ability into the abysses of the deep seas.

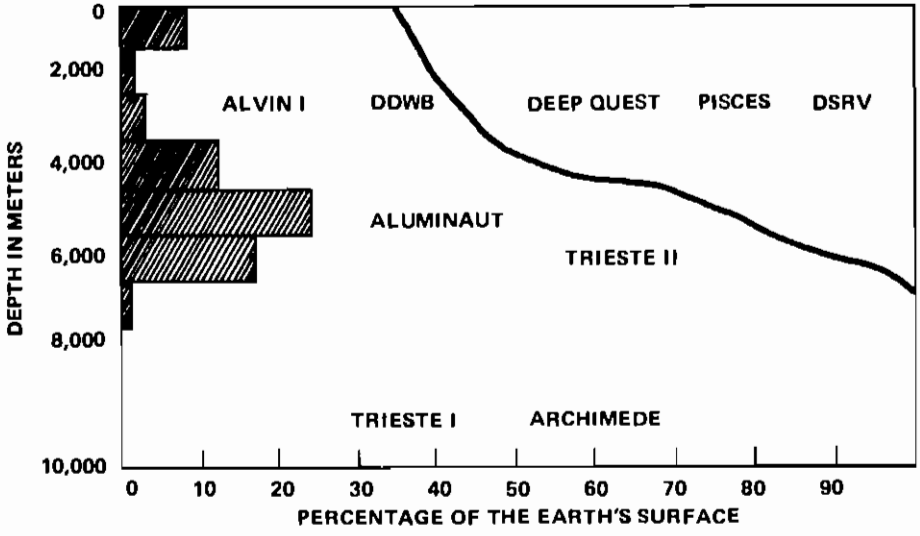
Since World War II there has been an awakening of active interest in the exploration of the sea. Before then the primitive techniques of studying the deep ocean floor consisted of sounding by lead and line and bottom floor sampling. This method was used to survey the ocean floor for the first Atlantic cable laying in 1866.[1] In 1960 ocean exploration was still reaching for the bottom, though the methods were more sophisticated; Professor Piccard's deep probing bathysphere, for instance, reached the ocean's deepest point.[2] The feasibility of man descending deeper into the sea was realized in 1957 by applying the simple lessons learned from aircraft construction practices. The key was to utilize structural materials with higher ratios of strength to density and to design submersibles to such high precision that a low factor of safety was tolerable.[3]

No single item did more to further the exploration of the deep sea than the echo sounder; invented in 1911 by the American physicist Reginald Fessenden, its use has resulted in extensive charting of the ocean floor.

The methods for exploring the deep oceans and subsoils fall in two distinct groups: manned vehicles and unmanned, remotely directed vehicles and instruments. In the first group, the military submarine has been joined by dozens of submersibles employing techniques learned from their military forerunners. By 1967 there were some 29 research submersibles, either constructed or under construction. Several countries have built and used submersibles including Great Britain, France, Russia, Switzerland, Canada, and the United States. Of this number, 20 are constructed to operate below 330 meters and four down to 3,800 meters, the mean depth of the sea and below which 44 percent of the seabed lies.[4] These submersibles are versatile platforms containing positioning equipment, searchlights, remotecontrol mechanical arms, television monitoring cameras, sonar, and even computers. Speed is sacrificed for endurance and three-dimensional maneuverability. At present, sustained operations are limited to depths above 200 meters, but by the year 2000 increased sophistication in ocean technology could make the ocean floors at 6,000 meters accessible to industrial operations.[5] The second group, exploration by remote unmanned methods, includes robots, television and camera, sonar survey, coring, gravity and magnetic variation surveys. Until manned submersibles reach the depth desired for sustained deep ocean survey work, these remote systems will continue to be relied upon. Many systems are used in both applications, such as television monitoring of both the interior of the submersible and the ocean floor itself. Sonar is an indispensable tool for navigation and survey aboard the submersibles. Sonar not only serves to define the irregular surfaces of the ocean floor but also to identify stratification between the surface and the basement rock. Determination of the sediment layers and the structure of the deep ocean rock beds is possible from these surveys. Thus seismic sections can be constructed identifying the crustal material as well as their thicknesses.[6] The seismic survey of the subsoil uses the refraction method rather than the ordinary echo-sounder method used to measure the depth of the sea. In the refraction method, the time that sound

**Fig. 1--Depth Capabilities of Deep Diving Research Submersibles[a]**

Seabed areas, as a percentage of the earth's surface are shown on the bar graph at the left edge. Curve represents percentage of earth's surface, on abscissa, above the depth indicated on the ordinate.




[a]John Bardach, *Harvest of the Sea* (New York: Harper & Row, 1968), p. 85.

waves take in passing from one medium into another is a function of the speed of sound through these various layers of material. This method provides fairly detailed information about the upper layers beneath the ocean floor.[7] Variations in the gravity anomalies are small over most of the earth but provide a means of studying the topographic features of the deep sea. These surveys help to identify the edge of the oceanic segments of the earth's crust. Magnetic field studies have also been a means of exploring the relative movement of the landmasses and the resulting change in the ocean floor.[8]

Another method of exploration is direct sampling by means of coring the subsoil to determine the material in the sediment and rock layers beneath the sea floor. The purpose in sampling the sea floor and subsoil is to determine the weight-bearing capabilities of the material in order to design deep sea structures that will not sink or displace when erected on the seabed. In addition, accurate positioning of surface ships and floating platforms is a complex engineering operation in deep water requiring detailed knowledge of the subsoil for the construction of permanent anchorages on the ocean floor. Core samples have been obtained by drilling into the sea floor from platforms anchored in as much as 1,470 meters of water.[9] Core samples in the Red Sea have enabled scientists to identify minerals such as gold, silver, zinc, and copper worth billions of dollars.[10] There are coring devices for obtaining samples or rock layers when the material cannot be penetrated by pneumatic or vibratory corers. Impact-type corers can obtain samples in relatively shallow depths of 30 to 60 meters below the floor. Deeper samples are at present only possible with extremely expensive procedures as used during Project Mohole in attempts to reach the inner layers of the earth's crust.[11] These techniques use rotary drilling and, although similar to land-drilling opera-

tions, require fairly accurate positioning equipment to enable the ship or platform to remain over the designated spot on the ocean floor.

Indirect visual survey by photographic equipment has become an important tool in ocean exploration. Like everything connected with deep ocean work, the camera system is complicated by light, water turbidity, positioning requirements, and water pressure. The camera systems in use today can best be described as self-contained stereo, underwater camera assemblies, accurately positioned above the bottom by sonar, provided with a high power light source, and automatic-recorded compass bearings on each frame in order to provide picture orientation; each element requiring not only remote control reliability but pressurized to withstand depths of 6,000 meters and below, with sea water temperatures just above freezing.

The techniques available for deep ocean exploration have been summarized. To date, exploration has been limited in two respects: first, by the immense area of the deep ocean floor, and second, by the enormous lack of knowledge on adapting both man and machines to this hostile environment.

There are engineering firms working on ocean projects without an adequate knowledge of the sea environment; building wave-measuring devices, for instance, that have been destroyed in one day by the waves they were to measure. Before exploitation of the deep ocean resources becomes a reality, greatly expanded engineering programs for the exploration of the deep seabed will be necessary.

## III--THE RESOURCES OF THE DEEP SEA AND THEIR EXPLOITATION

Surface and submarine exploration has provided ample indication of potentially exploitable resources in the deep ocean. Although limited, sufficient knowledge has been gained to provide some determination of the available resources. The resources considered here are those which are limited to the ocean floor and subsoil and which hold some chance of becoming economically exploitable. Although this discussion centers on the economic resources and the exploitation of these resources, both military and political interests are also involved, notably the possible interference of sea traffic with installations both on and below the surface of the sea and the need to police and protect these sea installations.[1]

The resources of the oceans can be neatly divided into three categories:

1. Biological plants and animals that live in the water.

2. Chemical materials that are dissolved in the water itself.

3. Geological minerals that occur on or beneath the seabed.

The biological significance of the waters of the deep sea is in its rich supply of nutrient elements. Originating from the sediments, nutrient-rich water is supplied to the shallower layers by the normal circulation of the oceans. In the surface layers, photosynthesis--the beginning of the ocean's life cycle--begins; later, dead organisms settle to the deeper water to again form--through bacterial action--nutrient elements, and the cycle is completed.[2] Studies have indicated that nutrient--rich deep waters can be artificially forced to the surface through the thermocline to increase the food cycle in areas of depleted food supplies. The costs are estimated as extremely high.[3] Chemical resources of the water generally do not vary in depth sufficiently to warrant exploitation of deep sea water rather than shallow layers. One exception to this has been reported in the Red Sea where bottom waters show larger concentrations of base metals such as zinc, copper, and other minerals that could conceivably be economically exploited in the future. A method of extracting high purity uranium from sea water has been re-

ported in Great Britain; this is considered significant even though the cost is $20 per pound, versus $5 for the Canadian-produced U308.[4] Only a few of the 60 known chemical elements in sea water have been commercially extracted; these include magnesium, bromine, salt, and fresh water. There is however, no reason to move offshore for the exploitation of these resources.

**Geological Minerals.** The geological deposits are of two types, minerals formed in the bedrock of the subsoil and surfacial deposits on the sea floor itself. The experiences gained in the exploration and exploitation of the more readily accessible resources of the Continental Shelf will be important. In one sense the transition from the Continental Shelf to the deep sea will only come as a result of successes on the Continental Shelf and continental slope.

**Mineral Deposits within the Bedrock.** These deposits include the identical geological formations found on the continents and are generally restricted to the Continental Shelf and continental slope. They include the metallic minerals found in vein deposits and those embedded in sediment rock such as oil, gas, sulfur, and coal. Other subsurface deposits are bedded salts, potash, iron ores, and various metallic minerals in veins.[5] As these minerals are likely to be found only in the top layer of the earth's crust, their existence beyond the continental margins is doubtful. However, traces of oil and sulfur have been reported as deep as 1,830 meters.[6] Beyond the continental slope certain minerals such as chromite, platinum, nickel, and cobalt, which are associated with the lower magmatic rock, can be expected. Pure chromite has recently been discovered by oceanographers of the Soviet Union in the Indian Ocean.[7]

**Petroleum Resources.** The number of offshore petroleum discoveries is growing every year. Important discoveries have been made on the Continental Shelves of over 20 countries; for example, about two-thirds of the current offshore production comes from Lake Maracaibo in Venezuela, the Persian Gulf, and the Gulf of Mexico. In 1968 the amount of oil taken from the sea increased to 16 percent of the world's production, while 6 percent of the world's natural gas production came from offshore wells.[8] Investigation of the Continental Shelf is still continuing with as yet very meager knowledge available of the geological deposits in the deeper waters of the continental slope and continental rises. The petroleum potential beyond the Continental Shelf is virtually unknown. However, from known geological requirements for petroleum, the deep areas of the continental slope seem favorable for petroleum accumulation.[9] Cooperative projects between petroleum companies have included reconnaissance and drilling in the Atlantic and Gulf Coast as deep as 1,500 meters. To encourage initiation of petroleum exploitation and investment in offshore resources, the U.S. Coast and Geodetic Survey is in the process of extending the geological and geophysical mapping to the continental margins.[10]

There are over 250 drilling barges now operating in the sea, throughout the world, drawing oil from the subsoil. The latest technical breakthrough is an electronic system to position floating platforms over the drilling well and maintain their position by sensing the slightest deviations. Position is maintained by reference to acoustic beacons set on the sea floor nearby which transmit to hydrophones in the hull.[11]

One technical breakthrough that will assist in exploiting oil in deep water is the unmanned removable package for the subsea well. The removable wellhead package is replaced by a submersible service vessel operating at depths below the operational depths for divers. The

system is scheduled for testing in the Persian Gulf this year, 1969.[12] In the early 1950's a floating platform was considered unsteady for drilling purposes; however, tests proved it could be done even when the drilling ship listed more than 20 degrees. Later versions were built to withstand 65-miles-per-hour winds and 28-foot waves and allow drilling in hundreds of meters of water. It has now become common to drill in over 100 meters of water.[13] In 1968 *World Oil* predicted that rigs would be able to drill to 5,000 meters in water depths of 500 meters.[14] The problems, however, are formidable. The factors that make operation and construction in deep water unique are:

1. Platform motion.
2. High pressures and low temperatures encountered at great depths.
3. Relative difficulty of locating and maintaining position.
4. Thick deposits of deep ocean sediments that provide little or no foundation-bearing capacity.
5. Biological factors, such as marine borers, perforating lead sheaths of cables at depths of over a mile.
6. Lowering and raising heavy loads through hundreds of meters of water.[15]

**Surfacial Deposits on the Deep Sea Floor.** The recovery of minerals from the seabeds such as tin, gold, and diamonds is a well-known mining operation in the seas. These minerals occur exclusively on the Continental Shelf in generally shallow water, where alluvial wash from the continents has deposited them. Two important deposits of minerals occur beyond the Continental Shelf; these are the manganese nodules and the phosphorite deposits. The deposits are significant in that they are the first deep ocean minerals found outside the exclusive rights of any coastal state.

**Manganese.** The manganese nodules contain, in addition to about 30 percent manganese, certain significant quantities of other metals such as iron, copper, nickel, and cobalt. The chemical composition of the nodules varies greatly from one deposit to the next. Deposits have been reported in the Pacific, Atlantic, and Indian Oceans at depths of from 800 to 6,800 meters. As a result of preliminary surveys, the amount of manganese nodules in the sea is considered enormous.[16] Although manganese nodules have been known to exist on the sea floor since 1876, the extent of their distribution has only recently been verified.

The nodules are a unique mineral form in that they continue to grow by chemical reaction involving manganese in the sea water reacting with dissolved oxygen in the water. The manganese precipitates out as manganese dioxide on any solid object such as grains of sand or even a shark's tooth. The nodules grow from a fraction of an ounce to the size of boulders and at a rate estimated at one-tenth of a millimeter per 1,000 years.[17] British oceanographers have recovered one boulder from the Philippine Trough weighing 1,770 pounds.

Photographs of the deep ocean floors show large concentrations on the plains of the deep ocean floor even at depths below 4,000 meters. One study by Scripps Institute has shown that ocean deposits of manganese nodules can extend over several thousand square kilometers. Russian oceanographers have also been working on the distribution and concentration of manganese nodules throughout the central Pacific Ocean.[18] Estimates of the tonnage of manganese nodules available on the sediment crust of the Pacific Ocean vary from $1.66 \times 10^{12}$ metric tons to $10^{11}$ metric tons. It is interesting to note that at the rate of one-tenth of a millimeter per 1,000 years, nodules are forming at the rate of $6 \times 10^6$ to $10 \times 10^6$ metric tons per year in the Pacific Ocean alone, a rate three times greater than the present world consumption of manganese. Cobalt is also forming at a rate

twice the present consumption and nickel at a rate equal to the present consumption.[19]

The importanee of the manganese nodules is due to the presenee of copper, cobalt, nickel, and manganesc (sec table I). Industry is giving manganese nodules considerahle attention from the standpoint of both mining and processing techniques. From initial studies, the cost of the investment to bring a deep sea mining operation, plus the asso-eiated onshore proeessing faeilities, into production is from $30 million to $300 million.[20] This naturally raises the question of consumer demands. In this connection, the produetion of niekel has heen below the level of demand sinee 1964, and free world industrial requirements are expeeted to double by 1975.[21] With respect to mangancse, there appear to be adequate supplies available; however, its sparse distribution on land involves political and economic considerations that make oceanic sources of some attraction.

Cobalt resources on land also exhibit a limited distribution. Over 80 percent of the free world cohalt resources comes from African nations: Congo(K) with 77 percent, Morocco with 13 percent, and Zambia with 10 percent. Copper resources are perhaps better distributed throughout the world with 28 perecnt concentrated in developing nations of Afriea.

**Phosphorite.** Less publicized than manganese is the occurrence of phosphorite, an important agricultural fertilizer, on the ocean's seaheds. Two-thirds of the world's production is mined in Florida, Tunisia, Algeria, and Morocco, with only eight nations (including the Soviet Union) controlling over 98 percent of the world's reserves. Countries such as Japan, Great Britain, Germany, and Australia import large quantities of phosphorite. Although land-mining costs are low, high transportation costs double the priec of the delivered phosphate roek.[22] The first examples found in the ocean were dredged up in 1873 by the H.M.S. *Challenger*. Sinec 1960 there has heen extensive exploration and prospecting off the California coast. There is however, at present, no commercial production of phosphorite from offshore heds. Unlike manganesc, phosphorite occurs, in addition to nodules, in sand, mud, and roadlike pavements on the sea floor.

Phosphorite deposits result from the movement of rich phosphorite-hearing cold waters moving to shallow warmer waters where the phosphorite is then preeipitated as nodules, flat slabs, or coatings on rocks. Deposits are more common at depths of 37 to 370 meters, although formations have been found at 3,800 meters along the base of the continental slope.[23] The size of the nodules varies from small pebbles to rocklike nodules 80 centimeters in diameter. The most favorable areas presently known, on the California and Mexiean coasts, do not have sufficiently

**TABLE I--ELEMENTS IN MANGANESE NODULES, PACIFIC OCEAN[a]**

| Element | Percentage by Weight | | |
|---|---|---|---|
| | Maximum | Minimum | Average |
| Menganese | 41.1 | 8.2 | 24.2 |
| Iron | 26.6 | 2.4 | 14.0 |
| Copper | 1.6 | 0.028 | 0.53 |
| Cobalt | 2.3 | 0.014 | 0.35 |
| Nickel | 2.0 | 0.16 | 0.99 |

[a]John L. Mero, *The Mineral Resources of the Sea* (New York: Elsevier, 1965), p. 180.

high-grade nodular phosphorite to compete with even the low-grade land product.[24] Phosphorite nodules are also found along the Atlantic coast of North America, the coasts of South America, Africa, and the Indian Ocean. Other locations throughout the world have been reported by Soviet oceanographers working on phosphorite exploration. As the highest concentrations of phosphorite are distributed throughout the world on the Continental Shelves, it appears less likely that deposits in deeper water will be exploited.

**Summary.** Although offshore oil and gas production was virtually nonexistent before 1948, by 1967 worldwide production of oil from offshore wells rose to 11 percent and by 1968 to 16 percent. Within 15 years it is estimated that over 25 percent of the world's petroleum may come from the subsoil of the sea, and as the need for petroleum products increases, industry will move in the only direction possible, the deeper ocean.

Although oil and gas exploitation is presently limited to depths of about 200 meters, there are clear indications of no technical limitation to prevent operations in much deeper water. The final report to the United Nations Economic and Social Council concluded that:

> There is no reason to doubt that substantial mineral deposits await development in the ocean environment beyond the continental shelf . . . . Current technology, developing with great ingenuity, is already capable of locating and evaluating many of these deposits. . . . Because of the relatively high exploration costs and the vastly greater outlay on exploitation, operations in the ocean environment can only be contemplated by the very largest organizations in a few industrialized countries and will not be undertaken without reasonable expectation of economic development.[25]

Although cost may be a determining factor, there are changing political considerations that could be far more overriding. The rising nationalism in the developing areas of the world could cause unforeseen changes in the political alignment of these nations. The prospective movement of oil exploration into deep water is most certainly influenced by the unsettled conditions and possible changes in the alliances in the Middle East Arab world and elsewhere.

The exploitation of mineral resources of manganese and phosphorite will depend on several factors:

1. The engineering design and development of the means to recover the minerals. Even though the nodules of manganese and phosphorite lie exposed on the seabed, harvesting techniques at depths of thousands of meters in the open ocean have not been developed. None of the methods of dredging commonly used in shallow water are completely satisfactory for deep ocean mining. Platforms for continuous work on the sea floor lack stability and safety for open sea conditions. Submarine and bottom habitats are still not advanced enough to be considered feasible. However, systems for dredging, lifting, and transporting manganese nodules have been designed; and components are being tested. Initial investment is high and will depend upon considerations of investment protection in an unknown legal regime.

2. Nodules of manganese are complex and metallurgically an unfamiliar matrix of chemicals. Existing separation methods do not lend themselves to the more complex manganese nodules. Research and development work on a new extraction method is being tested and shows promise; though, ironically, such a breakthrough would also bring vast quantities of low-grade ores on land into competition with sea resources.[26]

3. The physical distribution of manganese nodules with varying chemical composition will allow selection of the sea area for the desired proportion of minerals. At present the distribution

patterns are not well established, requiring greatly expanded oceanographic mapping.

4. The effect on the world prices of minerals of a successful breakthrough in engineering and metallurgy is not difficult to envisage. Large quantities of manganese thrown on the world market could cause the price to drop. This is also true for cobalt and nickel. Because the world land resources are generally concentrated in developing countries, this reduction could be particularly harmful. The distribution of land resources and the political alignment of nations possessing these resources might require the have-not nations to proceed with exploitation of certain strategic minerals, even though not economically feasible.

Economically important minerals have been discovered on the deep seabeds beyond the jurisdiction of the coastal states. The next question is: Who has title to these resources? In order to obtain beneficial utilization, control appears inevitable but involves complex questions on the principle of freedom of the seas. To avoid controversy, congestion, and waste, an equitable law regarding jurisdiction in the deep sea will be necessary.

## IV--JURISDICTION IN THE DEEP SEA

The implication of the preceding chapters is that the future will be marked by a movement from the Continental Shelf into the ocean depths. Consequently, questions of jurisdiction are certain to follow exploration and exploitation. As long as the movement is confined to waters adjacent to the Continental Shelf, exclusive jurisdiction is somewhat ambiguously covered by the Geneva Convention of 1958. Petroleum and potential phosphorite extraction thus fall within the scope of the Convention at the present time. But, for the deep ocean floor, where manganese and related minerals lie, no agreed jurisdiction exists; the Geneva Convention provides only a starting point for its development.

Two distinct situations arise concerning jurisdiction in the deep sea: first, those operations for exploiting mineral resources that progress from the shore to the Continental Shelf and continue to follow the mineral resources out onto the continental slope and to the deep ocean floor and subsoil; and second, the exploitation of resources that have no connection with the continental margin but have been formed and deposited in the deep ocean.

**Jurisdiction on the Territorial Sea, Contiguous Zone, and Continental Shelf.** Though it is universally agreed that states do enjoy special rights to areas of the sea and seabed adjacent to their coasts, the precise nature and extent of these rights is a continuously disputed matter. The Conventions on the Law of the Sea adopted by the United Nations Conference at Geneva in 1958 concerned not only the Convention on the Continental Shelf but also Conventions on the Territorial Sea and the Contiguous Zone and the Convention on the High Seas.[1]

The width of the territorial sea is the first disputed issue. Instead of the once almost common agreement on the "3-mile limit," states now prescribe widths varying from 3 to as much as 200 miles. The Convention at Geneva did not specify what the width of the territorial sea should be but only provided the rules for establishing the limits. A large number of states now specify a 12-mile width for their territorial sea; however, the United States, Great Britain, and others continue to affirm the 3-mile limit. A contiguous zone, generally 12 miles wide and thus overlapping the territorial seas, is a special zone recognizing the coastal state's rights to exercise control in matters of custom, fiscal, immigration, and sanitary regulations.

The Continental Shelf represents a special zone within which coastal states under international law possess certain regulating rights. The unilateral proclamation by President Truman in 1945 was the first action to recognize a state's special rights to offshore resources of the subsoil and seabed of the Continental Shelf. The proclamation stated: "... the Government of the United States regards the natural resources of the subsoil and the seabed of the Continental Shelf beneath the high seas but contiguous to the coasts of the United States as appertaining to the United States, subject to its jurisdiction and control."[2] The proclamation added: "The character as high seas of the waters above the Continental Shelf and the right to their free and unimpeded navigation are in no way thus affected."[3] Within a few years thereafter, several states issued similar proclamations. This addition to the laws of the sea should come as no surprise, for traditionally such "laws" have followed the expression of states' self-interest and the course of technical advances in the use of ocean resources.

Moving along the Continental Shelf, additional divisions are delineated such as the continental slope and rise, both of which describe the geographic conditions on the sea floor. These are transitional zones between the continent and the deep sea plain and within which some dividing line or boundary should exist to divide the seabed pertaining to the continent from the deep seabed. The drafters of the 1958 Geneva Convention on the Continental Shelf actually selected 200 meters (109.4 fathoms) as the limiting boundary and described it as follows:

> The term continental shelf is used as referring (a) to the sea bed and subsoil of the submarine areas adjacent to the coast but outside the area of territorial sea, to a depth of 200 meters, or beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas; (b) to the sea bed and subsoil of similar submarine areas adjacent to the coasts of islands.[4]

The drafters of the Convention specifically rejected the concept of complete sovereignty in this area because of the fear that it might encourage a coastal state to claim exclusive control of the high seas above the Continental Shelf and so run counter to the concept of the freedom of the seas as spelled out by the Convention on the High Seas. The intention was to provide legal protection without restrictions on free movement on the surface of the sea. Although the Convention provides that the waters above the Continental Shelf are high seas, coastal states have, in fact, extended application of their laws to the seas over the Continental Shelf. The tendency has been to expand the exclusive sovereignty for other than mineral rights and thus further reduce the area of freedom to others. The Soviet Union opposed proposals by some states to apply the regime of the high seas to the Continental shelf as a "struggle by states for appropriation of submerged areas of the high seas" leading to the strongest capitalist powers acquiring the riches of the Continental Shelf.

But in 1968, by edict, the Soviet Union expanded the definition of the Continental Shelf of the 1958 Convention with the addition that, "the sea bed and subsoil of depressions situated in the continental shelf of the U.S.S.R. irrespective of their depth, shall be part of the continental shelf of the U.S.S.R."[5] The edict further prohibits individuals and companies from carrying out research, exploration, and exploitation of natural resources and *other work* on the Continental Shelf of the Soviet Union.[6] In October 1968 the Soviet Union, Poland, and East Germany signed a joint declaration on the Continental Shelf. They declared:

> First, the continental shelf of the Baltic should be used 'exclusively for peaceful purposes.'

> Second, although it is specified that the exploration, exploitation, or other uses of the continental shelf of the Baltic must not unjustifiably interfere with navigation, fishing, or conservation of living resources of the sea, no reference is made in this connection to fundamental oceanographic or other scientific research.
>
> Third, the participants agree not to give over parcels of the continental shelf of the Baltic to non-Baltic states or to citizens or firms of those states for the purpose of exploration, exploitation, or *other uses.*[7] [Emphasis added]

Communist China in 1958 declared that China's territorial sea extended to 12 nautical miles.[8] In 1958, although not participating in the Geneva Convention, Communist China issued a semi-official expression of freedom of the high seas in the Peking press.

> The high seas are that part of the ocean or sea the use of which is shared by all nations. On the high seas ships and nationals of all states are free to navigate, to fish, to hunt, and to engage in other maritime enterprises as well as to lay submarine cables. The principle of the freedom of the high seas has been recognized by international law for all nations.[9]

Communist China has, however, declared certain areas of the high seas along the coast as "military security areas."[10] Communist China has also taken unilateral action to protect fisheries in areas of the high seas and has further declared a contiguous zone for enforcing customs out to 15 miles.[11]

It appears that the elastic definition of where the jurisdiction of the state ends will result in conflicting claims. The United States, in some instances, has extended application of its laws to the Continental Shelf, i.e., to treat it as a contiguous zone.[12] Indonesia and the Philippines have made efforts to establish a single zone of territorial waters around the entire archipelago that constitues their national territory. The 200-meter line of the 1958 Convention is no geological limit, nor does it delineate the geological limits of potential mineral resources. The definition includes non Continental Shelf seabed and excludes portions of a coastal state's real Continental Shelf. The second portion of the definition, the "elastic capabilities clause," allows the state to extend its limits to that which it can essentially reach. This heavily favors nations that are highly industrialized or that are willing to subsidize offshore mining. The Soviet jurists have argued that the outward boundary of a coastal state should not depend upon the technical capability of that state but, rather, upon the capabilities of all states, i.e., those of the most technologically advanced state simultaneously expand the outer limits of the Continental Shelf for all states as it develops its own shelf at ever-greater depths.[13] The United States has, in fact, issued leases beyond the 200-meter depth, nor has it refused to lease beyond the 200-meter depth on grounds of nonjurisdiction of the nation.[14]

If there is to be some order to regulate the development of the deep seabed and subsoil, some more realistic definition of the freedom of the seas is required. It is, however, difficult to see how to retain the freedom of the seas as a medium for passage yet provide legal protection for the development of the sea's resources. One author describes this changing attitude:

> The implication is that freedom of the seas cannot be conceived of as being static, especially since increasing intensity and sophistication of ocean exploitation require legal arrangements beyond the traditional understanding of this concept. An evolving concept of freedom of the seas does not imply that more suitable versions must reflect narrow conceptions of our national interests. The problem is to adapt the principle of freedom to the general interest rather than to any exclusive interest of our own.[15]

The development of a legal regime for the Continental Shelf, imperfect as it is, was a big step forward. To develop

an equivalent legal regime for the deep ocean would, in comparison, be a gigantic accomplishment. Possible regimes for this purpose are discussed below, with their implications for developed and developing countries.

**Regime One.** This would derive from the possibility of using an existing international agreement, the Convention on the Continental Shelf. This provides that practices for the Continental Shelf could be extended "beyond that limit, to where the depth of the superjacent water admits of exploitation of the natural resources of the said area."[16] Although this clause provides a means of following the resources out to deep water, the exploitability clause was added principally to provide those countries without a Continental Shelf, such as Peru and Chile, "equal treatment" with more fortunate states. The idea was that if a coastal state achieved the capability to exploit beyond the 200-meter boundary, no renegotiation of the convention would be necessary.[17]

This extension would generally assume that, for all practical and economic purposes, mineral exploitation would be sufficiently close to the coastal state, that the Convention would apply. "The key phrase in this connection is the reference in Article 1 to 'submarine areas adjacent to the coast.' While 'adjacency' is not specifically defined, it undoubtedly conveys a notion of limitation which cannot be reconciled with indefinite extension into the great oceans."[18] This is the development that appears most likely for the near future and is favored by those who say that no new law is required until the extent of the resources are better defined. Opposing views are that the time for new law is before the need arises. One pertinent view is that if the jurisdiction of the coastal state continues to the limit of technology, a boundary is defined somewhere in midocean where it meets the boundaries of other nations.[19] Thus, without further law, the seabed would be divided among the coastal states. To those who view ocean resources as a legacy of all mankind, which is essentially implicit in the Maltese proposal to the United Nations General Assembly in 1967, this solution is unacceptable. Developing nations, in particular, view the resources of the sea as common to all and not open only to the technologically advanced nations.

As far as oil and gas, and even phosphorite, are concerned, the simple extension of the provisions of the 1958 Convention would be possible, with some extensions beyond the 200-meter limit. However, with respect to manganese and its component minerals, this regime would most likely result in no control since it fails to provide a legal environment for exploitation with some guarantee of exclusive rights to the exploiter. Politically, this solution appears most favorable to the more industrialized nations and less to the developing nations, with no favor for the noncoastal states. The Soviet Union would certainly oppose this attempt to divide up the ocean, as it would result in an unequal distribution of the resources. Perhaps the greatest disadvantage is that under this regime the extension of the coastal states' jurisdiction beyond the Continental Shelf would pose difficult questions about the freedom of the seas.

**Regime Two.** This would consider the minerals on the floor of the deep ocean as common property of mankind, but would recognize that states must have exclusive mining rights to areas sufficiently large to be economically mined. By charging fees, indirectly all nations of the world would benefit. The Convention on the Continental Shelf would require modification to limit the boundary of the Continental Shelf and to ensure that no nation has any claim beyond that limit. The proponents of this regime see it as a preventive mea-

sure to forestall a race to divide up the seabed.[20] Senator Claiborne Pell has proposed that the United States take steps to obtain international agreement that would declare the floor of the deep sea and the resources of the seabed and subsoil, beyond the Continental Shelf, as free for exploration and exploitation of all nations. His proposal included setting a boundary for the Continental Shelf and ensuring that no nation obtain sovereignty beyond that boundary.[21] An appropriate international body would be established to administer and distribute exclusive mining rights. Such a body could be the United Nations.

The international community has established a framework to determine the character of a regime that could be supported by all nations. The Ad Hoc Committee formed by the United Nations General Assembly had as its initial task a survey dealing with the mineral resources and the food resources excluding fish.[22] Their report has been completed, but as yet no proposal for a legal regime has been sponsored by the United Nations. Considerations affecting such a regime are discussed in chapter V.

**Regime Three.** This would treat the seabed and subsoil as the property of no one and thus subject to appropriation by any state. But for a state to declare sovereignty over an area traditionally requires occupation which, in the case of the deep seabeds is at present not clearly conceived. Although actual occupation is not an ironclad requirement, mere proclamation would not substantiate a suitable claim. Two difficulties are pointed out by Dr. Emery, famed oceanographer at Woods Hole Institute. Not only is it uncertain what types of activities would be sufficient to constitute effective occupation on the seabed, but the physical characteristics of the seabed make it difficult to establish the boundaries of an area claimed.[23] The lack of any technical ability to establish jurisdiction would clearly deprive developing states of any access to the resources of the deep sea under this type of legal regime.

**Regime Four.** A regime in which the property of the seabed would be considered world communal property and not subject to the jurisdiction of any one state can be visualized. Resources are open to exploration and exploitation by all nations. Such a legal system is similar to an open-range policy. The exploiting state would operate under a national flag as provided under the convention on the High Seas.[24]

Two problems are usually associated with such an unregulated legal regime. The first concerns the possibility of exhausting the resources if no constraints are provided, unless the resources are inexhaustible; while the second involves the desire by the person mining for some reasonable opportunity to recover his investment without interference. Even if the resources are vast, competition will result; for there still remains the fact that some claims are bound to be better than others, if not just closer to markets.[25] The "flag state" of the exploiter would assume police protection and insure noninterference under the rules of international law.

**Regime Five.** Finally, there is a possible regime which combines two of the above and envisions the registry of claims with an international body, in conjunction with a system of "flag state" jurisdiction.[26] This alternative retains the best advantages of the freedom of the seas aspect of Regime Four and provides some degree of control to restrict the possibility of unwarranted "grab" for all the resources. The international agent could develop a code of mining regulations, including the size and amount of safety zone required for each claim.

**Summary.** Possible solutions for existing and future regimes of the sea

range from a completely open sea, for all to use as they desire, to a fully controlled internationalized sea. The choice of a regime will depend ultimately on how the majority of the world nations view their own roles in the sea. Many of these nations are unable to even verify what they have heard or read concerning the "riches of the sea." It is not surprising, then, that agreement on a regime for the deep seabed and subsoil is not forthcoming.

But the law of the sea is changing; and somehow questions of the rights of coastal and noncoastal states will need clarification, the extent of the Continental Shelf will need to be defined, the freedom of scientific research ensured, military uses controlled, and a determination made of how ultimately to exploit the resources and for whose benefit. The proponents of a quick solution are opposed by those who suggest the necessity to learn first what is there before attempting to control it; the latter add that no solution is better than a hasty one based upon limited knowledge. The U.N. report on the resources of the sea suggested that there was a need for further scientific and technological research on the seabed and added, "Present-day assessment indicates that at a chart scale of 1:1,000,000 only 15-20 percent of the sea area is adequately covered by bathymetric data."[2]

## V--NATIONAL INTERESTS

The development of a legal regime for the seabed and subsoil may develop on a case-by-case basis, with precedents provided upon which to build further international law of the sea. Professor McDougal has said: "The development of the resources of the seas will not take place in a vacuum, but rather under the laws of the particular states which are doing the exploiting."[1] In the end, national interests will determine the type of legal regime for the deep seabed; thus an examination of the national interests of developed and developing states may lead to conclusions concerning the most acceptable regime. Important national interests are at stake, for economically advanced states are no more willing to place control of the sea resources in the hands of an international organization than are the developing nations to agree to a status of no regulation. The meeting point, or agreement if there is to be one, will depend upon how each faction views its needs. Developing nations desire much needed revenue; while for developed nations, security and freedom to exploit are paramount.

It is not difficult to see how interest and motivation in the seabed and subsoil are generated, with published phrases expounding: potential of incredible wealth, ocean's fabulous minerals, a treasure chest, bountiful crops, and inexhaustible resources. Nations with nothing see their chance to reap a harvest from the seas, in spite of Secretary General Thant's caution to such countries against hope of quick wealth from mineral deposits or untapped food resources on the sea bottom.[2]

One study estimates that in 20 years, 70 percent of the world's consumption of nickel, copper, cobalt, and manganese will be supplied by the ocean. If unsupervised, the study notes, there would be disastrous effects upon developing nations, many of which depend on the current high prices of raw materials for their existence.[3] According to another estimate, world market prices could be affected by a single producer mining oceanic manganese, to the extent of a drop from 90 cents per unit to 50 cents; cobalt prices from $1.50 per pound to $1; and nickel from 70 cents to 60 cents a pound. Similar action by two or three producers would have a greater effect.[4] And therein lies one of the main stumbling blocks to international control. Clearly, if exploitation of these new resources proceeds as favorably and as fast as seems likely, it will

considerably rearrange industrial and trading patterns in the world, increase the power of certain fortunate states and, by the same token, reduce the advantages now held by certain developing nations supplying strategic minerals. African nations, for instance, provide a considerable portion of the world's mineral production. Table II lists only those minerals that are included in the resources of the sea.

**TABLE II--AFRICAN NATIONS' PERCENT OF WORLD SUPPLY OF CERTAIN MINERALS[a]**

| Mineral | Percent of World Supply |
|---|---|
| Cobalt | 81 |
| Chromite | 50 |
| Manganese | 50 |
| Copper | 26 |
| Phosphate Rock | 28 |

[a]"African Mineral Production," *World Business,* April 1968, p. 22.

These figures, although important, are only a part of the story. What is more relevant is the degree to which these African countries depend upon minerals for their very existence. Table III indicates the percent of exports that were attributed to minerals in 1966.

**TABLE III--AFRICAN NATIONS' MINERALS AS A PERCENT OF EXPORTS[a]**

| Country | Percent | Mineral |
|---|---|---|
| Libya | 98 | Petroleum |
| Mauratania | 95 | Iron |
| Zambia | 93 | Copper, Cobalt |
| Congo (K) | 80 | Copper, Cobalt |
| Liberia | 70 | Iron |
| Gabon | 54 | Manganese |
| Algeria | 50 | Petroleum |
| Morocco | 36 | Phosphate, Cobalt |
| Ghana | 25 | Manganese |

[a]"African Mineral Production," *World Business,* April 1968, p. 23.

Another example is Saudi Arabia whose economy is vitally dependent on oil revenues, which account for more than one-third of the GNP and 80 percent of all government revenues and 90 percent of foreign exchange receipts.[5]

From the point of view of the advanced countries, on the other hand, foreign resources are often withdrawn by expropriation or for other political reasons. In Peru, where the United States has millions invested in one of the world's largest copper operations, a recent change in government has endangered American investments in both petroleum and copper.[6] The result is a desire by private investment to obtain minerals from less politically affected sources, and the sea offers an attractive alternative.

Even before the pace of progress in developing science and technology allows assault on the deep seabeds and subsoil, there may be an effect upon prices of land resources. The current prices of minerals can be affected by technological advances which bring deep sea resources within reach, resulting in the downward trend of mineral prices even before new exploitation takes place. Atomic energy had a direct effect upon fossil fuel prices long before it became commercially available. The effect could even be reversed; for instance, one headline recently read: "Big U.S. government and industrial investment in underwater research is threatened by Maltese proposal that UN be given control of ocean floor--and the wealth of its minerals."[7]

Other proposals stir the self-interests of developing nations:

> The Maltese proposal that an international body having jurisdiction over the sea floor could gross $5 billion and net $4 billion annually witbin a decade from licenses and royalties bas become a stumbling block in the attitude of the Declaration of Santiago countries, represented on the *Ad Hoc* Committee by Argentina, Brazil, Chile, Ecuador, El Salvador and Peru, all of wbom claim all the sea bed and over-lying

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> waters out to 200 miles from their coastlines. The Italians have also complicated further the problem by proposing to UN that 'internal seas' (such as the Adriatic) be left to the bordering countries to decide among themselves the arrangements for exploration and exploitation of mineral resources.[8]

During the debate on the Maltese proposal at the 22d General Assembly, the Governments of Afghanistan, China, Cyprus, Ghana, India, Libya, Nigeria, Sierra Leone, Somalia, Trinidad and Tobago, and the UAR emphasized that future exploitation of the ocean should primarily benefit the developing countries.[9] The need to protect the interests of the smaller nations is often voiced, but a less restrictive view is that any regime which threatens or leads to the unilateral division of the spoils must be rejected.

**Interests of Developing Nations.** There are three major identifiable interests which developing nations have in common:

1. Obtain economic gain through a "share-the-resources" scheme which falls within the overall desire to narrow the division between the have and have-not nations.

The costs of exploration and exploitation are beyond the resources of developing nations. Their only hope of economic gain would be through leases of "their property rights" or through an international ownership and the distribution of gains to developing countries.

2. Protect the price level of raw materials essential to many developing nations' economy. This requires control of exploitation through an international organization which could stabilize the prices of minerals.

3. Acquisition of new territory, in this case seabed and subsoil, is a means by which the leaders of the developing countries focus attention on rising nationalism, often plagued by tribal, religious, and ethnic differences.

**Interests of Developed Nations.** The interests of the developed nations of the world in a legal regime are far more complicated and diverse, including security on a global basis, worldwide trade which includes freedom of the seas, aid to and development of other nations, use of nuclear power, industrial needs for minerals, scientific research, exploration and exploitation as a challenge.

**Security.** Both the United States and the Soviet Union have urged that the question of controlling the emplacement of weapons of mass destruction on the sea floor beyond the limits of the present territorial waters be negotiated in the Geneva Arms Control Conference. A measure barring the use of nuclear weapons on ocean floors would, they suggest, be a logical sequel to the treaties that have already banned these weapons from the Antarctica and space.[10] However, military research in the deep oceans is directed toward a multitude of national defense systems. A recent article lists items such as undersea facilities for purposes of fuel caches, supply depots, refueling stations, submarine repair facilities, and nuclear weapons shelters.[11] The Navy's Director of Research and Development, Robert A. Frosch, commented on how some people, "... frequently look to the improvement of the underdeveloped nations. Potential benefits of such proposals must be weighed against the implications to the United States security of vesting even informal control of the sea bed in an international organization."[12] Adm. David L. McDonald put it more strongly when he emphasized two things to protect the national interest of the United States: "... we must maintain an invulnerable strategic force, to ensure that our deterrence is effective; and we must make certain that the United States is the nation that enjoys the benefits of prior presence and continued use in the ocean

areas of greatest importance to us."[13] President Johnson stated still another national interest in an address in July 1966:

> . . . under no circumstances, we believe, must we ever allow the prospects of rich harvest and mineral wealth to create a new form of colonial competition among maritime nations. We must be careful to avoid a race to grab and hold the lands under the high seas. We must ensure that the deep seas and the ocean bottoms are, and remain, the legacy of all human beings.[14]

**World Trade.** The U.S. interests in world trade rest heavily on the freedom of the seas. Any legal regime that limits the ability of the United States to carry out its commitments throughout the world would not be considered in this country's interest. With the increased worldwide involvement of the Soviet maritime fleets, a similar interest must also be considered for the Soviet Union. Both countries have political interests in foreign aid and assistance in nation building to present a strong basis for a legal regime that would not inhibit the free and unrestricted use of the world oceans. With the increased use of nuclear-powered ships, any international regulation limiting their use would be viewed by several leading nations as unpopular, yet there are nations in the world that have voiced their fear of nuclear contamination.

**Industrial Need for Minerals.** With only 6 percent of the world's population, the United States produces nearly 50 percent of the world's goods. Although the United States has an economic stake in preserving the freedom of developing nations, the United States is also dependent on other nations, especially those developing nations from which certain vital resources are obtained. As an example, the United States must import 100 percent of its tin, 95 percent of manganese, 97 percent of nickel, and 88 percent of cobalt. If imports such as these were cut off, the economic and military strength of the United States would suffer.[15] As the needs of the developing nations increase, the demand for minerals by both the United States and other nations for the type of goods in which American industry excels, such as heavy machinery, trucks, and washing machines, will increase the need for scarce minerals. These same developing nations will, in time, require the use of their own resources for home industries.

As a result of the exchange program with the Soviet Union during 1964, Soviet scientific and technical work in oceanographies became known. Actual Soviet exploration offshore has been largely confined to oil production in the Caspian Sea. However, experts consider the Continental Shelf of the seas contiguous to the Soviet Union to have excellent oil and other mineral potential. In the last 15 years the Soviet Union has increased its efforts in oceanographic work, their expeditions and research teams aboard almost 200 ships are on all the world's oceans. Although more extensively involved in fishing research, Soviet cartography is considered of high quality, and underwater seismic exploration and earth's core sampling on the ocean floor have been carried out. The Soviets have formed research expeditions for exploring the resources of the Atlantic and Pacific Oceans and have recently commenced a joint research program on deep sea marine resources in the Mediterranean with France.[16] The general Soviet interests in a legal regime for the exploration of the deep ocean floors have not been made explicit; however, either through competitive need or economic requirements, the Soviet Union will most likely continue to pursue a widening interest in the oceans and a specific interest in the deep seabeds and subsoils.

**Scientific Research, Exploration and Exploitation as a Challenge.** Dr. Julius

A. Stratton, Chairman of the Commission on Marine Science, Engineering and Resources, after almost 2 years of study, reported:

> How fully and wisely the United States uses the sea in the decades ahead will affect profoundly its security, its economy, its ability to meet increased demand for food and raw materials, its position and influence in the world community and the quality of the environment in which its people live.[17]

The report indicated that the growth of scientific understanding of the world oceans will not be accomplished quickly or easily and estimated that by 1980 an annual operating budget of $2 billion would be needed. The forecast visualized a total expenditure of $8 billion for the next 10 years.[18]

**Summary.** The expanding world demand for minerals makes seabed and subsoil resources attractive for exploitation. However, in planning for and exploiting these new resources, there may be a threat to worldwide mineral prices. Developing nations, whose economies depend, sometimes exclusively, on export of important industrial minerals, see the unrestricted exploitation of the sea resources as not in their national interest. Developed nations, on the other hand, are interested in exploiting additional sources for critical minerals, presently available in only a few land areas of the world. The interests of developed nations tend toward broader areas such as security, world trade, and freedom to explore and exploit; while smaller nations, many of them emerging from colonial status, look to the sea for needed capital for nation building.

## VI--CONCLUSIONS

The activities on the high seas are increasing, as access to the deep seabed and subsoil becomes technically possible. While there are no vast, superrich lodes of rare minerals concentrated for easy pickup, a manganese mining operation in the deep ocean is possible and could be economically feasible. Although technological advances in oceanology have made mining possible, it has also created an international dilemma that threatens the traditional concept of freedom of the seas. The limitless seas are perhaps already becoming restricted. There are ominous warnings by scientists that man's unrestricted use of the oceans as a dump for nuclear waste, industrial by-products, and oil and chemical pollution could eventually result in making the sea, and thus the earth itself, uninhabitable. The economic, political, and military short-range requirements must be adjusted to fit the present, very limited knowledge of the ocean's complex role in the cyclic functioning of the earth's atmosphere.

A further concern is that uncontrolled exploitation would rapidly deplete the resources of the sea. A regime for the deep sea must strive to sort out the interplay between two factors: jurisdictional claims and economic values. The dominant controlling force will be the national interests of states. The choices, considering these interests, are between an international organization, the United Nations for example, by multilateral negotiation; or, in the absence of control, by conflict. As exploration continues in the oceans, changing economic values will modify jurisdictional significance and ultimately raise security issues.

Thus, some form of legal regime is likely to develop. A basis already exists in the Geneva Convention on the Continental Shelf, and resources now being exploited fall within the agreements of this Convention. A variety of proposals have been advanced for the deep ocean beyond the Continental Shelf; the variations stem primarily from how each views the development of law. On the one hand, it is said that the evolution of international law should proceed together with the development. This has

been the traditional evolution of international law. On the other hand, there are advocates for establishing a regime *now*, before the deep ocean is completely defined and before nations establish hard and fast positions, leading to increased tensions and perhaps conflict. Underlying this last proposal is the belief that more powerful nations can preempt all others in the use of ocean resources if a "wait and see" solution is adopted.

In the last analysis, however, any workable regime must be based on solid fact and a full understanding of the geophysical nature of the seabed and subsoil rather than optimistic estimates and enthusiastic speculation. This, in fact, is where it stands today; there is no sound and generally acceptable basis for negotiating an international convention on the deep ocean. There is, however, little doubt that the question is on the agenda for the future and that every item on the discussion list will be of profound interest to military planners.

## BIOGRAPHIC SUMMARY

Col. John D. Lewis, U.S. Army, did his undergraduate work at Virginia Polytechnic Institute, is doing graduate work in international relations with The George Washington University, and is a graduate of the U.S. Army Command and General Staff College and of the U.S. Armed Forces Staff College. He has had extensive experience in artillery, especially air defense artillery. His most recent duty assignments have been as Commanding Officer of the 5th Battalion, 2nd Artillery, in Vietnam (1966-67) and as a staff officer in the Military Assistance Advisory Group, Italy (1967-68). Colonel Lewis is currently a student at the Naval War College, School of Naval Warfare.

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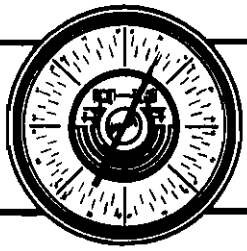

# THE BAROMETER

I read Captain M.D. Blixt's article "Soviet Objectives in the Eastern Mediterranean" in the March *Review* with interest and general agreement.

Capt. Blixt opined that the newly constructed Soviet aircraft carriers appear to be designed for helicopter assault but undoubtedly possess an antisubmarine capability.

I translated the enclosed article from the 22 December 1968 issue of *Red Star*, as perhaps the first Soviet commentary regarding their aircraft carriers.

Of interest is the obvious attempt by the Soviets to emphasize the effective ASW role of the carrier to the exclusion of any assault mission.

RICHARD T. ACKLEY
Commander, U.S. Navy

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The 22 December 1968 issue of the Soviet Ministry of Defense newspaper, *Red Star*, carried a front page photograph and article concerning the new Soviet antisubmarine cruiser, presumably the *Moskva*. This, if not the first public mention of the helicopter cruiser, is the most extensive Soviet internal publicity given this class of ship to date. Two photographs were shown: one an aerial port quarter view of the ship, and the other of six aviators walking on deck after a flight.

The accompanying article was written by Capt. 2nd Rank N. Radchenko, a correspondent for *Red Star*. His article is of interest as it is, perhaps, the first official Soviet commentary on this new type of ship and its operations. The article is titled "Antisubmarine Cruiser Conducts the Search" and translates as follows:

The presence of an enemy nuclear submarine is assumed in square "N." Detect and destroy her--is the training problem received by the crew of the antisubmarine cruiser.

Raising a resilient wave, the cruiser proceeds to the search area at full speed. No matter how complicated the training problem may be, the ship's commander firmly believes that the high readiness of the crew, and the modern equipment and techniques with which the ship was armed, would permit her to successfully solve the problem.

Such confidence arose from the strenuous training days, in frequent sea cruises. For example, on a recent cruise in the Mediterranean Sea, the commander of the cruiser once again satisfied himself of the excellent seaworthiness of his ship. The cruiser is steady in waves of any stormy weather, which provides her crew the best of working conditions.

In contrast to other ships of such displacement, narrates the commander, the cruiser possesses good maneuverability. This quality, during the search and tracking of submarines, allows an uninterrupted tracking of any maneuvering target. Such a bulky and cumbersome thing--said Fedor Tetovich--but it can literally turn around on a five kopeek coin.

The ship is able to make good speed and has high self-sufficiency. Thanks to this, the cruiser is able to sail in any area

of the world ocean, retaining full fighting efficieney.

Sailors, petty offieers, and officers pride themselves in serving in sueh a ship. Sailors of the mine-torpedo unit, headed hy Capt. 3rd Rank B. Popov, took first place in the socialist competition. This experienced and authoritarian offieer knit together a friendly collective fighting unit, and managed with high marks to fulfill all the prohlems of the past training year.

Close behind the minemen and torpedomen followed the rocketmen. The eleetromeehanieal specialist seetion also produced good work. Several thousand miles lay astern the ship, and its main and auxiliary mechanisms always operated without a hitch.

The cruiser entered the search area. Now it is the business of the aviators. One after another the helicopters rise above the sea and depart in seareh of the submarine. One of such machines earries the outstanding erew of pilot "high class" Maj. L. Dmitrienko. Flying under any conditions, this crew always distinguishes itself with high military skill. And that time it was equal to the oceasion--and was the first to establish eontact with the submarine.

After this followed the attack, shattering and inevitable. The enemy nuclear submarine was destroyed.

Excellent! So was evaluated the exact and eoordinated assignment earried out by sailors and aviators of the eruiser. Having fulfilled an orderly training prohlem, the cruiser set a new coursc.

Ψ

The moral effect of an omnipresent fleet is very great, but it cannot be weighed against a main fleet known to be ready to strike and able to strike hard.

*Sir John Fisher: To Lord Stamfordham, 25 June 1912*

# THE SOVIET NAVY IN THE MEDITERRANEAN SEA

*The buildup of Soviet naval forces in the Eastern Mediterranean provides Moscow with new leverage in its dealings with the West in this vital area. However, this new capability should not be treated in isolation. From the Soviet view, the prospect of outflanking "Western containment" with its relatively new maritime capability must indeed be intriguing.*

An article by

Captain Carl H. Amme, U.S. Navy (Ret.)

A key to understanding Soviet naval strategy in the Mediterranean is in examining separately the naval role in peacetime, in support of Soviet desires to extend its influence in the Middle East and North Africa, and the roles the Russian Fleets might be required to carry out in times of crises, conflict, and wars. The provision of economic and military assistance to the Arab Socialist States provides these nations with the means to threaten Israel and to exploit their rivalries with the traditional Arab States. The presence of Soviet warships in the ports of the client Arab States provides these nations with the symbol of support which gives them backbone and encourages them to subvert their traditional neighbors. Soviet naval presence in Alexandria, Port Said, and Latakia also provides a strong deterrent to Israeli reprisal attacks against these important port targets.

The frustrations we experience when we observe the skill with which the Soviets are exploiting their Navy and merchant marine in peacetime--for political and psychological purposes to gain positions of influence in the Middle East, in North Africa, and in other nations of the "Third World"--should not lead us to overlook the fact that these activities are not contrary to international law. While we may suspect their ultimate purpose, they are legal--and carefully so. They are, in fact, not so different from the activities of the 6th Fleet in the Mediterranean since World War II which have contributed so successfully to the establishment and maintenance of U.S. influence in Greece, Turkey, and Lebanon. The breakout of the Soviet Navy from its geographical maritime confinement under the international principle of "freedom of the seas"--a principle staunchly defended by the United States--is merely to adopt time-honored practices that court little risk except in time of war.

These practices represent a peacetime challenge to the United States to the extent that we permit a pattern to be established that would infringe on the

freedom of our operations. To avoid the harassment of Soviet warships entering our fleet formations during tactical exercises, we might be tempted to restrict our operations to the Western Mediterranean. This would be most unwise, for unless we continue to assert our right to operate in the international waters of the Eastern Mediterranean and in the Black Sea and to make regularly scheduled visits to friendly ports bordering these waters, we will only abet the Russians in their attempt to create the impression that the Eastern Mediterranean is "their lake"--an impression of recent years somewhat successfully created in the Baltic, as it has been for so long in the Black Sea.[1]

We must keep in mind that the Soviet naval forces in the Mediterranean in peacetime represent more of a psychological and political factor than an actual military threat. These forces are still smaller in number (though not in effectiveness) than the Italian Navy. To counter the Soviet gambit we must demonstrate our Navy's capability and resolve to go where we want to go without Soviet interference.

In contrast to the peacetime situation, in times of crisis and conflict Soviet naval forces in the Mediterranean Sea are a serious threat to U.S. interests. Owing to a host of causes and events associated with the creation of the state of Israel, Arab nationalism, and inept hungling on the part of the West, the Soviet Union over the last decade has established interests and influence in the Middle East at little risk. The presence of a strong Soviet fleet in the Mediterranean, the expanded Soviet support to the Arab Socialist nations, and the projected withdrawal of the British from the Persian Gulf area all tend to support the view that Soviet influence will expand in the area. There is little question that the Middle East with its rich oil resources and its geographical position as a tribridge between three continents remains a target of prime strategic importance. It is only natural that the Soviet Union should seek to use its navy to defend and extend its interests and to limit the influence of the West. It is in this role of defending Soviet interests in time of crisis and conflict that the Soviet Navy threatens us the most.

Two confrontations in the Mediterranean area appear possible within the next decade: the Arab-Israeli conflict and Cyprus. To understand how the Soviet Navy threatens our interests we must first examine some of the strategic issues involved in these potential crises.

The immediate threat centers around the Arab-Israeli enmity. In the June 1967 war, the Soviet Union appeared indifferent to the security and integrity of Israel even though the Soviet Union recognized Israel's right to exist. The Soviets apparently calculated either that war would not result from Egypt's closure of the Tiran Straits or that the Arab nations had the administrative competence and military capability of defeating Israel or at least holding their own in a military conflict. The Soviet Union apparently calculated also that the United States would be deterred from intervening on the side of Israel--should the war go against that little nation. The statement by the State Department spokesman that the United States would remain "neutral" supported this view.[2]

Whether this thesis can be supported or not, the fact remains that, whatever the outcome, the Soviet Union stood to profit. If Egypt had succeeded in facing

[1] Recent evidence suggests that the Soviet Navy is succeeding in establishing such a pattern. In recent months,the 6th Fleet has not visited any Eastern Mediterranean ports, except in Turkey. State Department opposition and public opinion in some cases restrict our port calls.

[2] Statement of Robert J. McCloskey, 5 June 1967 and Secretary of State Dean Rusk's elaboration, 6 June 1967, *The New York Times*, 6 and 7 June 1967.

Israel down over the Tiran Straits closure without a fight, a major diplomatic victory would have been won and the U.S.S.R. would have benefited from its staunch support. Had the Arab nations succeeded in defeating Israel in armed conflict, the United States might have been tempted to intervene. This would have turned the entire Arab world, finally united on this one issue, against the United States. Soviet influence in the Middle East would have become dominant. The third alternative, Arab defeat, would leave Nasser with no one to turn to except the Soviet Union, and this would give the Soviet Union the opportunity to regain influence as "a friend in need." In the outcome this is what happened, but the cost to Russia has been tremendous in resupplying Nasser's army and air force. There is a question, moreover, as to how permanent this influence will be. As David Brinkley put it, "The U.S. gave the Israelis no help which they didn't need. The Russians gave the Arabs no help, which they did need."

In this writer's view, this last point is something the Arabs will never forget.

What the Soviet Union may not have realized, except in retrospect, is the great risk of direct U.S. confrontation it would have run had the Arabs begun to defeat Israel. The United States might have found it impossible to stand idly by and witness the destruction of Israel. At the time, the United States may not have recognized the dangers inherent in this possible contingency and may have relied on what turned out to be a correct assessment of the capacity of Israel to defend itself. But the demonstrated decisiveness of air supremacy in the June 1967 war, particularly in the open physical environment of the Middle East, is a lesson that cannot be overlooked by the Arabs or by the two superpowers. One can well imagine the consequences of a renewal of the conflict in which the Arabs gain the strategic initiative by launching a tactical surprise air attack against Israel. Perhaps Israel might be able to withstand the attack and, because of greater military competence, come back to win. But the possibility that Israel might not be able to do so cannot, in the future, be ignored in American and Soviet calculations.

War changes things, and there can never be a return to a strict status quo ante bellum. The considerations that led the U.S.S.R. to instigate or at least to give tacit acceptance to Arab activities that led to the June 1967 war may no longer hold true. For one thing, the Soviet Union has achieved an important increase of influence in Egyptian affairs. In the absence of renewed hostilities, the influence of the Soviet Union over the U.A.R. and other Arab Socialist States seems assured for some time to come. But the strengthening of Soviet influence, by its very nature, is tied to enlarging the Soviet commitment. In a renewed conflict the Soviet Union very likely might be forced to use its navy to support the Arab cause, rather than to be made out to be for a second time "a paper tiger." This would present hazards that the Soviet Union is not likely to relish.

Hindsight has now had an opportunity to influence Soviet policy. Aside from the risk of a direct confrontation with the United States, Russia also has a stake in the permanent state of Israel, for without Israel as a "bete noir" there is no future for the Soviets in the U.A.R. As C.L. Sulzberger aptly points out, "Without Israel's implicit threat to the Arabs, Russia could never hope to retain their favor and thus entrench itself along the seaway to Asia."[3] It must also be apparent that the United States would be strongly motivated to uphold the future territorial and national integrity of Israel, most particularly with the growing presence of the Soviet Fleet in the Mediterranean Sea.

[3] *The New York Times*, 9 February 1969.

Thus, on two counts it can be argued that the course of true Russian interest will run toward the maintenance of the status quo (of tension and turmoil) as it exists today.

The presence of the Soviet Navy in the Mediterranean in effect limits American options. One can postulate that the Arab-Israeli conflict that erupted into full-scale war in 1948, 1956, and 1967 will very likely occur again within the next decade. Assuming that it does, it is unlikely that the Arabs could achieve a blitz victory against the well-trained Israeli forces. Nevertheless, should these circumstances obtain, there is a certain possibility that U.S. military forces may be alerted and amphibious forces deployed forward. There may be some problem obtaining air transit or landing rights, but a number of military options appear available:

(1) Provide Israeli with American aircraft in peacetime so that replacement aircraft can be ferried in to replace losses destroyed by the Arab surprise attack. (Pilots will have to have been trained in U.S. equipment.)

(2) Provide 6th Fleet air support to defend Israel.

(3) Make an MEU-size amphibious landing in Libya to secure and defend Wheelus Air Force Base for later Army-Air Force STRICOM operations.

(4) Make an MEF landing in Sinai or Israel.

(5) Make a STRICOM landing in Israel.

Soviet naval forces could hamper or even block all except the first and last option--just by their presence. In theory, actions could range from interference with air launch and ship-to-shore movement of troops to covert submarine hostile action or open combat operations on the side of the Arabs. But in an actual crisis, there is serious doubt that the Soviet Navy would undertake anything more than interposing or harassing tactics. The Soviets are not likely to do anything that might escalate to a bigger war. But, equally, the United States might not want to risk a confrontation either, and therefore Soviet naval presence alone might result in no action by Washington decisionmakers. In any event, such naval presence would in effect narrow the number of U.S. options.

Of a totally different nature is the crisis contingency of Cyprus, one of the most intractable problems of the Eastern Mediterranean. Cyprus is not a case of subversion attempting to overthrow an established government. It is a situation where the Greek ethnic government seeks to impose its will on the Turkish minority of about one-fifth of the total population. It is an explosive situation where two of our allies, Greece and Turkey, might become embroiled in conflict. The crisis erupted in violence in 1964 and again in 1967. It is by no means settled. Conflict might flare up at any time, and the possibility that the United States may have to interpose military force between the Greeks and Turkey is real. In such circumstances the political constraints are heavy:

NATO has proven ineffectual.

UNICYP is severely constrained in its use of force for peacekeeping functions.

Airbases on the island are in the hands of Greek Cypriot armed forces. There are serious questions of the availability of airbases in NATO countries (except Greece) and even in Spain.

Diplomatic pressures would undoubtedly be exhausted. U.S. military alternatives that would seem to be available are:

(1) Interposing the U.S. 6th Fleet between the Turkish invasion forces and Cyprus;

(2) Landing an MEF to seize the Cypriot airfields to prevent a Turkish air invasion from Adana;

(3) Intervene with a joint air assault task force.

Alternative (2) would necessitate embarking the amphibious forces during

the tense diplomatic negotiations prior to the invasion. Such amphibious deployment might well deter the Turkish invasion. Alternative (3) might be considered hazardous without first ensuring the availability of the Cyprus airfields. In this case, an amphibious landing in Cyprus might be required to make a subsequent STRICOM deployment possible.

It is quite obvious that Soviet interest in this possible contingency would not be of the same order as in the Arab-Israeli conflict. Nevertheless, the U.S.S.R. has interjected itself in past flareups by offering aid to President Makarios. It is conceivable that the more militant stance recently taken by the Kremlin in the case of Czechoslovakia might lead the Soviet leaders to seize the opportunity to enter the dispute in a more concrete way. In any event, the presence of the Soviet Fleet in the Aegean will be an inhibiting factor that Washington decisionmakers must consider in selecting alternative courses of action.

In time of crisis or conflict, the Soviet Navy does indeed present an element of danger to be weighed in U.S. policy decisions leading to the commitment of forces. In the first place, it can be effectively interposed in waters needed by the U.S. Navy to facilitate military aid to a besieged ally. Second, the Soviet Union can and has provided naval ships and weapons that might be used in countermaval action against our Fleet to surrogate nations in North Africa and the Middle East. Some of the more underdeveloped nations are not so inclined to fear confrontation with the U.S. Navy as are the great powers (witness the *Pueblo* and the Gulf of Tonkin incidents). Although present evidence would suggest that most Soviet naval forces were designed for deterrence and defense of Russia's flanks, there are many indications that the Soviet Navy is now building ships appropriate for the support of amphibious operations in a crisis or limited war environment. These naval capabilities become increasingly important as the Soviet Union challenges U.S. influence in areas *not* within the spheres of influence of either superpower--such as the Middle East and North Africa. Neither the United States nor the Soviet Union can well afford to allow the other to gain a predominant position of influence in these areas.

Here we come to the crux of the matter: the uncertainties in assessing enemy intentions. It is all very well to claim that the Soviet Union operates on an opportunistic and low-risk policy. Based on this perception, some strategic analysts have suggested that the Soviet Union would have backed down in 1948 if we had sent an armored column up the autobahn when access to Berlin was blocked. Others have maintained that had the United States mined Haiphong Harbor the Soviet Union would have done no more than to protest. But we can never be sure, for the motivation that impels either superpower to use military force to assert or preserve its influence may be as much dependent upon the political tensions between the two nations as upon the importance of any specific issue in dispute. The Middle East and North Africa for example, did not become important to the United States until Russian influence began to penetrate into the area. Malta did not become important to the United States until Russia displayed an interest in its shipyard. For years we have taken for granted our dominant influence in the Mediterranean. Now it is being challenged, and the hegemonial tensions of the cold war are making themselves felt. The conflict of interests over well-defined objectives becomes subordinate to the passionate quality of ideologies whose aim is to assert prestige and test resistance. What is at stake in the hegemonial tensions between the superpowers is domination. These tensions are heightened or relaxed according to

the specific competing issues at the moment, but in essence it is they which are the driving force that submerges identifiable political issues and threatens to lead to conflict.

Domination of the entire area is not, therefore, a prerequisite objective for the present drive to extend Soviet influence into North Africa and the Middle East. Already the Soviet Union has extensive influence in Algeria, Egypt, and Yemen, and its influence is spreading to the People's Republic of South Yemen. The reopening of the Suez Canal, as Professor Edward L. Beach points out, "will, at a single stroke, put Russia on interior lines of communication to the Indian Ocean and all the countries on its littoral."

The Soviet Navy, as it is being used towards psychological and political ends, is a present and potential threat to Western prestige and freedom of action in the Mediterranean Sea and its environs. Further, the resultant "heating up" of tensions between the two superpowers in this region is a threat to stability within the entire international community.

It is logical that the Soviets, in their use of maritime power for cold war ends, should proceed from the Mediterranean Sea into the Indian Ocean area. With the eventual opening of the Suez Canal, the opening of a southern sea route to Siberia as well as the establishment of trade and friendly relations with the nations bordering the Indian Ocean become realistic objectives. Such a move would counter Western influence in the Afro-Indian Ocean region and, at the same time, bring East African and South Asian economic potential into the Soviet orbit. This prospect must be extremely intriguing for Soviet planners, who for so long have viewed "Western Containment" from the *inside* and now see an opportunity to become actively involved in the worldwide maritime action.

> Communications dominate war; broadly considered, they are the most important single element in strategy, political or military.
>
> Mahan: *The Problem of Asia*, 1900

## BIOGRAPHIC SUMMARY

Capt. Carl H. Amme, Jr., U.S. Navy (Ret.), did his undergraduate work at the U.S. Naval Academy (Class of 1936), holds a master's degree in international relations from the American University, and is currently completing work on his Ph.D. at the University of Southern California. He attended the National War College, served as an adviser to the NATO Defense College, Paris, and recently authored *NATO without France* (Hoover Institution on War, Revolution and Peace, 1967).

Captain Amme joined the staff of Stanford Research Institute in 1962. Since that time he has been engaged in research on strategic concepts, projections of future military/political environments, roles and missions and problems of national defense. He directed a 2-year study to analyze the consequences of various arms control and disarmament concepts on the capabilities of military forces in the European environment. He has participated in studies dealing with the role of missile defense in Soviet strategy, conflicting views of NATO nations on the use and control of nuclear weapons, deterrence in the 1970 era and the role of the Navy, future concepts of seapower, and strategic projections for the Middle East.

# A COMMITTEE REPORT OF THE STRATEGIC PLANNING STUDY ON U.S. ALTERNATIVES FOR AN INDIAN OCEAN AREA POLICY

(The following, a committee report, is a product of a Naval Warfare group effort in the regular curriculum study of strategic planning. The committee was directed to concentrate on a study of the "military alternatives" for the area indicated. Naturally, the committee found itself unable to confine its considerations to strictly military matters, and the report as submitted contains excursions into political and economic matters as well. It is published as a matter of substantive interest and as an illustration of one of the educational methodologies employed by the Naval War College. The report represents a collective view of the subject committee, is not necessarily endorsed by the War College, nor does every participant of the committee necessarily subscribe to every recommendation or position argued therein. It should be noted that an addendum has been appended to the regular report. This addendum points out additional considerations raised in a critique of the report following its formal presentation to the student body of the School of Naval Warfare.)

In recent years U.S. military leaders, particularly those in the Navy, have expressed increasing concern and interest in the Indian Ocean region. Their concern has resulted basically from the announced withdrawal of British forces east of the Suez in 1971 and the power vacuum resulting from the diminution of free world forces and power presence in the region. They view this power void as presenting to other powers an opportunity to expand and gain influence in the littoral states. The presence of Soviet naval vessels in the Indian Ocean during 1968 has given additional meaning to this concern, as have reputed Soviet discussions with Indian leaders on the subject of base and facility privileges for Russian ships.

The Indian Ocean region is a vast expanse of ocean waters and diversified littoral states. It contains approximately one-third of the world's population and is rimmed by states that are both politically and ethnically divided. The ocean itself is the world's third largest, covering some 28.4 million square miles and extending from the Tropic of Cancer in the north to 30° S. (in fact, it actually extends to Antarctica though the area for discussion purposes may be held to terminate far north of there). From east to west the distance is approximately 6,000 miles, stretching from 40° E. on the western side to 120° E. on the eastern side. Included within the ocean are six major bays or bights; the Red Sea, Persian Gulf, Bay of Bengal, Gulf of Aden, and the Gulf or Straits of Malacca.

Littoral states extend from the Union of South Africa along the eastern

periphery of the African Continent, into Saudi Arabia, then into the Asian subcontinent, finally ending with major island groups in the Indonesian and Australian landmasses. There are also important islands in the oceanic expanse. Key ones are Madagascar (the Malagasy Republic), Ceylon, Socotra, Zanzibar, the Seychelles, and Mauritius. Also the Andaman and Nicobar Islands, near the western shores of Burma, and Bahrein in the Persian Gulf, renowned for its oil reserves, are of significant--though different--strategic importance. Despite the numerous bays in the Indian ocean, a scarcity of natural harbors exists. The most important of those in the north, in Asia proper, are Aden, Bombay, Colombo, Calcutta, and Rangoon. Others are Perth, in Australia; Mombasa, in Kenya; Dar es Salam, in Tanzania; and Durban, in South Africa.

Access to and egress from the Indian Ocean can be controlled at four strategically located places. These are the Cape of Good Hope, the Suez Canal, the Indonesian Straits and the Tasmanian Sea south of Australia. Two additional chokepoints exist--the Gulf of Aden and the Gulf of Oman, respectively closing off the Red Sea and the Persian Gulf. During periods of limited or general war, adequate naval power could effectively deny the freedom to transit these key geographical points or areas.

Some Asian strategists believe that the nation controlling the Indian Ocean thereby secures the landmass of the Asian subcontinent. The ocean is the easiest and most accessible entry to the region. Although complete domination of the ocean areas would be most difficult to achieve, except by controlling the strategic chokepoints, political and economic inroads can be made through the projection of military presence. Land routes into the area, particularly in the Asian subcontinent, are difficult because of the mountain ranges which form natural obstacles to land armies and ground transportation.

The Indian Ocean littoral states are representative of the emerging or "Third World" nations. They do represent a significant voting bloc within the United Nations and could be either influential or obstructive to the aims of Western nations. There is a strong resentment to any form of colonialism since they have been subjected to this form of external control for centuries. Their independence is very young, having been achieved, for the most part, after World War II. By natural consequence, any threat to that independence by superpowers, as perceived by the affected nations, will be met with animosity and noncooperation. Thus, a cautious, prudent approach must be undertaken to guard against complete denial of Western presence in the region.

The Soviets have achieved remarkable success in the Middle East by a change of tactics over the past years. Initially, they hoped to gain entry into the Middle East by military presence and subversion. This proved unsuccessful. Eventually their aims were realized through a politically oriented program using the military as an assisting agency. It is conceivable the same tactics may be used to influence the important states of the Indian Ocean.

The era since World War II has seen an emergence of changing political and social patterns in the states on the Indian Ocean littoral. Encouraged by the U.S. philosophy of self-determination, nationalism has forced the decolonization process in the Asian subcontinent and the insular states of the Indian Ocean expanse. For over 100 years these countries were subject to the mercantile colonial system of Western Europe. After World War II independence was demanded and attained. Unfortunately, most of the states involved were not ready for independence and were not capable of ensuring their own survival. Decolonization brought political fragmentation, the like of which is unprecedented in history. It also

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brought political and economic instability and violence of extraordinary ferocity. Although sovereignty was recognized, there was still a basic reliance on the metropole or other world powers for economic and military assistance. This relatively weak posture of the "Third World" countries has made them most vulnerable to subversion and domination. After almost two decades, the countries bordering the Indian Ocean are still ripe targets for political, economic, and military penetration. As of now, however, none has yet succumbed to the ideologies and pressures of communism. The majority have maintained a policy of nonalignment, accepting aid and assistance from both Communist and free world sources. The residual influence and presence of former colonial powers may have impeded and shielded external pressures by ambitious foreign powers. Once all residual presence is removed, however, any undeveloped region will almost automatically become more susceptible to external influences and pressures. The Indian Ocean region contains no world power in the sense of today's definition. The one country possessing the potential of a world power is India.

There are subregions within the Indian Ocean region. The entire area is divided racially, religiously, and politically. Consequently, it is doubtful that unity and collective economic and military organizations will emerge in the near future as a defense mechanism to external aggression. This diversity creates not only a condition vulnerable to external aggression, but also intraregional disputes. Irrespective of the course of diplomatic jostling and minor skirmishes, the key to control of the Indian Ocean landmass is the ocean itself. The torturous topographic landforms of northern Pakistan, India, and Burma tend to inhibit the southward flow of power and influence. The water routes of the Indian Ocean offer the easiest access to the littoral states. External powers can operate maritime fleets from bases on the periphery of the region, but can be limited in their freedom of action by an effective indigenous maritime force within the ocean region. Also, denial of bases in the region to external powers can make sustained naval operations very difficult.

**INDIA**

| ARMY | NAVY | AIR FORCE |
|---|---|---|
| 900,000 Men | 17,000 Men | 60,000 Men |
| 22 Divisions | 1 CVA | 500 A/C |
| 800 Tanks | 2 Subs | 60 MIG 21 |
| 2,500 Arty. | 2 CA | 60 MYSTERE |
| 800 APC | 3 DD | 111 Helos |
| | 11 Frigates | 45 CANBERRA |

**PAKISTAN**

| | | |
|---|---|---|
| 300,000 Men | 9,000 Men | 14,000 Men |
| 13 Divisions | 1 Sub | 240 A/C |
| 4 Tank Brig. | 2 DD | 40 F104 |
| 900 Arty. | 3 DE | 20 B57 |
| | 2 Frigates | 8 IL28 |
| | | 80 MIG19 |

**IRAN**

| | | |
|---|---|---|
| 164,000 Men | 6,000 Men | 10,000 Men |
| 8 Divisions | 1 DD | 166 A/C |
| 1 Tank Brig. | 3 Frigates | 75 F86 |
| | | 75 F5 |

**INDONESIA**

| | | |
|---|---|---|
| 290,000 Men | 40,000 Men | 22,000 Men |
| 17 Brigades | 12 Subs | 550 AC |
| 4 Tank Bns. | 7 DD | 60 MIG |
| Misc. Arty. | 11 Frigates | 25 TU16 |
| | 2 M.C. Brig. | |

**AUSTRALIA AND NEW ZEALAND**

| | | |
|---|---|---|
| 49,000 Men | 19,500 Men | 24,000 Men |
| 12 Bns. | 1 CVS | 237 A/C |
| 1 Tank Regt. | 1 Sub | 80 MIRAGE |
| | 5 DD | 52 CANBERRA |
| | 4 DE | 20 VAMPIRE |
| | 5 Frigates | |

**Fig. 1--Indigenous Forces**

From a military standpoint, the Indian Ocean region is a mixed picture. The majority of states are very weak militarily, corresponding to their political and economic posture. There are some, on the other hand, which are potentially strong if they can solve their

internal problems. India, in all probability, could be the most powerful nation in the area. She is the most nonaligned nation and has a large population--second only to that of Communist China--but most of her people know only poverty. Of all the nations in this region, however, India is probably advancing most rapidly. The British left behind a sound administrative base constructed during their colonial rule. Economically and militarily, India has a basic Western orientation. She possesses the strongest of all the regional armed forces. Her army is the fourth largest in the world, well trained and well equipped. Participation by the Indian Armed Forces in either a regional collective defense force or a multilateral defense force with Western presence would enhance the free world capability of maintaining a balance of power in what is becoming now, apparently, a power vacuum. Diametrically opposed to the Indian military power potential, however, is her political orientation of nonalignment and noninvolvement with the superpowers. India is therefore a stumbling block to any strategic alternatives for U.S. military power in the Indian Ocean region.

In contrast to India's modern equipment and 1 million men in service, Pakistan has an army of only 300,000 organized into four armor brigades and 13 infantry divisions. Its navy is inferior to that of the Indians as is its air force. The navy has 9,000 men and operates a varied small force of ships. The air force is manned at a strength of 14,000 and has about 240 modern jet aircraft.

Indonesia has an army of 290,000 formed into 16 infantry brigades. The navy is of significant strength--40,000 including two marine brigades. Naval ships include one heavy cruiser, 12 submarines, seven destroyers, 11 frigates, and other assorted ships and landing craft. Air force elements comprise 22,000 men with 550 aircraft of more than 30 types. Approximately 200 of these aircraft are available for combat operations and include modern jet fighters and bombers. Indonesian military strength exceeds that of Pakistan, and this nation can be considered one of the more capable nations from a military standpoint. Its internal problems are, however, occupying more of its attention at this time than external threats to its security.

The United States has contributed military aid to Iran for over 20 years. The Iranians have a substantial force, but it is numerically inferior to three of the other Indian Ocean states. The Iranian Army of 164,000 is constituted in seven infantry divisions and one armor division.

Air defense is provided by a *Hawk* battalion acquired through U.S. military aid. Compared to other Asian nations, the navy is relatively weak, consisting of only 6,000 personnel and coastal patrol-type ships. The Air force is also inferior, consisting of only 10,000 personnel and about 166 jet aircraft. Despite its limited military capability, however, Iran still constitutes a shield against any Communist aggression in the northern tier of the Middle East.

The only European-origin population and military force contiguous to the region and currently available to the free world are those of Australia. (South Africa, of tremendous strategic importance, is for other reasons out of the picture, and there is no foreseeable possibility of this changing soon.) Australian Armed Forces, small but well-trained, frequently operate in conjunction with New Zealand forces and are capable of expansion during crises. The population base does not, however, permit of a sizable military force when compared to other Anglo-American, West European, or East European power bases. The Australian Army has a strength of 43,300 in eight infantry battalions, one tank regiment, and an airborne regiment. The Navy has 16,500 personnel and operates an antisub-

marine warfare (ASW) carrier, a submarine, five destroyers, four destroyer escorts, and an all-weather fighter squadron plus an ASW squadron. Although small in size, it is one of the more formidable naval forces in the area. The air force with 20,500 men operates 200 combat aircraft which include jet fighters, helicopters, and transports and a surface-to-air missile squadron.

New Zealand has the smallest force of all the militarily important countries in the vicinity, though it should be recognized that it is not strictly an Indian Ocean nation. The army has only 5,600, the navy 2,900 and the air force 4,300 personnel. Her military equipment is limited but relatively modern. While New Zealand is small, her spirit of entering into alliances to ensure not only her security, but that of the world, is remarkable.

The foregoing discussion addresses only those countries with military power which might be used against other states in the region. Others--such as Yemen, Ethiopia, Burma, Malaysia, and the east African states--have little military capability at this time for external military adventure. They cannot be discarded from an evaluation of military potential, since some do possess sufficient forces to supress internal uprisings and, upon occasion, to foment uprisings in neighboring states.

The Indian Ocean region possesses a wealth of resources. None, however, is essential or strategically important to the United States. Sufficient oil, chromite, rubber, mica, tungsten, and uranium are available to the United States from either domestic or other international sources. The fact that America does not rely on the Indian Ocean region for these resources, however, does not negate the fact that many of our allies are dependent on their access and availability. For example, oil from the Middle East and the Persian Gulf area is vitally important to our West European and Japanese allies. This source also provides a primary base to support U.S. operations in Vietnam.

From an investment viewpoint, the United States has been a major participant in the aid and development of the region. There is a substantial Government investment in the form of military and economic aid. India alone has received over $7 billion in economic aid. American private oil investments in the Middle East approximate $2.85 billion. Private oil company operations, as a result of this investment, reaped some $1.1 billion in revenues during 1966.

What then are the interests and objectives the United States may have in the Indian Ocean region? If, perchance, this region were to become subjugated to a nation or combination of nations hostile to the United States and the free world, a definite threat to the security of America would very likely be posed. A hostile power capable of capitalizing on the tremendous population base and resources would have a significant power base from which to expand to other global areas. Thus, one interest the United States has in this region, as in many other world regions, is the prevention of domination by a power or powers inimical to our security.

A corollary interest is the assured access and availability to the world of resources in the region. Although these resources are not vital to U.S. existence, they are to some of our allies. The question might then be posed, "Why don't they then undertake to protect those resources so vital to them?" Basically, it can be answered, they do not possess today the economic and military power unilaterally or collectively to support the policies which would be necessary. The British withdrawal from the Indian Ocean region is an excellent example of economic and military atrophy which affects them all. Therefore, to ensure the availability of vital resources to our allies, the United States must be a major participant in the

protection of not only our own, but of free world interests. For as the security of our allies is endangered, so is that of the United States.

A third interest the United States maintains is one of regional stability as a contributory asset to world peace. Because of the nature of the emerging nations and their generally weak political and social characteristics, their vulnerability to revolutionary and external pressures is high. Although we would like to see such nations develop through an evolutionary rather than a revolutionary process, the United States must not attempt to interfere, however well-intentioned its objectives, with methods which the indigenous peoples normally term imperialistic. The majority of these nations fervently desire to be a part of the 20th century, but they are still fighting problems of the 13th. They want to accomplish in a matter of a half century what it has taken the United States, starting from a superior position, more than 300 years, as a European colony in an uninhabited, astonishingly rich land.

There is a diversity of opinion concerning the threat posed to the littoral states of the Indian Ocean. Many factions believe there is no threat and that a power vacuum has existed for years in the region. On the other hand, there are those who perceive a threat of influence by nations hostile to the interests of the United States and the free world. Coupled with this threat is its magnification as the British gradually phase out their political and military presence.

There are two reasons why there has been no major foreign power penetration or domination of Indian Ocean countries since World War II. One, the maritime capabilities of the most potent contenders, the Soviet Union and Communist China, have been minimal. The limited capability each has had has been needed to sustain and defend the economy and security of the respective homelands. Within the past 10 years Russia has, however, made great strides in maritime power. Additionally, both Russia and China have oriented themselves to economic and technical assistance tactics in the states bordering the Indian Ocean. India has received considerable aid from the Soviet Union, and this has been the opening wedge to further political intrusion and military presence.

The second possible reason why encroachment has so far been limited is the residual presence of Great Britain. There are, however, arguments pro and con as to the true effectiveness of that presence since World War II. Some experts argue that since British power could not halt Japanese excursions into the area prior to the war, by definition a power vacuum existed at that time which Japan filled in 1942. On the other hand, it can be argued that presence of the British, even though their power was diminishing, was at least symbolic and therefore was a countervailing force to other foreign pressure. It is further contended that the planned withdrawal of the British will create a power vacuum into which will flow Communist influence and presence. Finally, it is entirely true that other (naval) powers do exist in the area, but all are already heavily engaged with their own problems. On balance, regardless of which line of reasoning one chooses to adopt, the fact remains that there either is, or will be, a major power void in the Indian Ocean region.

For over a century British political and military presence was evidenced from South Africa around the littoral to Singapore and onward to Australia and New Zealand. There were British bases in East Africa, the Persian Gulf, Aden, Pakistan, India, Ceylon, Malaya, and Singapore plus many of the island groups. The retrenchment from these bases began to become evident in the early 1950's as British power diminished from the strains of World War II. The continued dwindling of power became

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explicit and acknowledged with the White Paper of July 1967 which announced a planned withdrawal of all military forces from the area east of the Suez by 1975. Originally the ground forces were to withdraw by 1970, with the air and naval forces remaining another 5 years. These dates have been advanced, and all forces will be out of the area by 1971. In December 1967 British forces were removed from Aden, a strategic control point at the confluence of the Red Sea and the Gulf of Aden. Indications are that the Soviets may have already begun to fill this gap.

The British military cutback will be extensive in the Indian Ocean region. Approximately 80,000 troops and considerable naval and air force strength have been already or will be redeployed, theoretically to bolster NATO commitments. This includes two aircraft carriers, one commando ship, and support sea and air units, support ships, and air units consisting of eight bomber squadrons, reconnaissance aircraft, air defense squadrons, and ground-attack and medium-range support aircraft. All that will remain of Western presence in the Indian Ocean will be two U.S. destroyers on rotating assignment and a flagship permanently home ported.

For centuries the West has believed the Soviets have had designs on the Middle East and perhaps the Asian subcontinent as well. Today these aims have apparently been partially realized. With the invitation to enter the Middle East having been extended by Egypt in 1955, Soviet expansion and influence have been on the increase. Their political and economic tactics have been advantageously used in building an infrastructure that could give them control of the Red Sea and the Arabian Sea. Facilities are now available to the Soviets in Egypt, Yemen, Sudan, and Somalia. Since the water routes of the Indian Ocean offer the easiest and freest paths to the littoral states, it can be assumed that expanding Soviet commercial and naval maritime power will be used in these waters to further Russian political strategy.

Both the Soviet Black Sea and Pacific Ocean fleets pose a threat of presence in the Indian Ocean. The present closure of the Suez Canal operates to a disadvantage for the Soviets. This has required the Black Sea ships to transit the circuitous South African water route. Reopening the Suez would be most desirable from the Russian view and could immediately bring forth a large, sustained naval presence in the Indian Ocean. The Pacific Ocean fleet has deepwater capabilities and is equipped and trained to exercise influence not only in the western and northern Pacific but in the Indian Ocean as well. The West must be aware of the possibility that the Soviets may obtain naval base rights in both the Pacific and Indian Oceans.

A recent study by the American Security Council for the House Armed Services Committee alludes to Admiral Gorshkov's visit to India in February 1968 as an indication of the Soviet seapower design east of Suez. Russia and India, it states, are completing military ties and the admiral used the occasion of his visit to seek refueling and repair rights for Russian naval ships in Indian ports. The Soviets have already given four submarines to the Indian Navy. Russian naval presence in the Indian Ocean was first demonstrated in 1968. There are definite indications continued presence will be maintained.

The report goes on to point out that the Indian Ocean presents a broad spectrum of opportunities for the use of naval power to achieve political goals. Many of the countries bordering the ocean are in ferment, particularly the East African ones, and are vulnerable to Soviet politico-military pressures. If the Soviets deploy a strong naval squadron in the Indian Ocean, including helicopter carriers and naval infantry, the options available to them will multiply

unless there is a free world counterforce. There is also an indication that the Soviets are using massive military aid to India as a wedge to obtain naval bases in the Andaman and Nicobar Islands. These islands are within easy striking distance of Malaysia and Indonesia and are of high strategic value.

A writer for the *Indian Express* of Bombay recently noted that the "arrival of the Soviet Navy means for the first time since Vasco da Gama, Western naval supremacy is faced with a serious challenge." He added, "on the western flank of India, the Soviet Navy's appearance will have an incalculable effect on the Persian Gulf. Already, the Russians have made it plain that after British withdrawal from the area, they do not want the American Navy to take over." Clearly, while the Soviets have made only a small beginning, they have achieved a considerable gain in psychological terms. South Asians view the Soviet Navy as an important factor in their future.

China also poses a potential threat to the Indian Ocean region. Primarily, this threat is focused on the states bordering Red China: Pakistan, India, Burma, Thailand, Laos, and Vietnam. Although China has a limited number of submarines, her maritime forces are basically of a coastal defense type. The most important threat to these countries is from the army via overland routes. Border clashes between China and India occurred in 1962, and some 140,000 Chinese troops still remain in the proximity of the disputed territory. Additionally, a growing nuclear threat is being developed by the Communist Chinese. Since the Communist Chinese have always regarded the subcontinent as fertile territory for their domination, the spillover of China into the neighboring states is within the realm of possibility.

By 1947 the United States had developed a worldwide strategy of containing Communist aggression. The international sorties of the Soviets, our former ally, and the demise of a free China opened American eyes to the threat of Communist ideology and objectives. The Truman Doctrine of 1947 initiated American diplomatic and military strategy that was to bind the United States in bilateral and multilateral commitments on a global basis. A military strategy of forward deployment was adopted. In Europe the NATO structure was fashioned to provide a bulwark to Russian aggression. In the Middle East the U.S. 6th Fleet, the Truman and Eisenhower Doctrines, and U.S. encouragement and support in the formation of the CENTO alliance have attempted to counter Soviet ambitions. In the Far East the line of forward strategy was drawn initially with military presence in Japan, Okinawa, and the Philippines. The invasion of South Korea by the North Koreans in 1950, the Taiwan Straits crisis of 1954-55, and the Geneva Accords of 1954 on Vietnam changed our concept and strategic line. As a result of these events, our line was advanced to Korea and Taiwan and extended through Southeast Asia. SEATO was formed in 1954 without, however, the participation of neutralist India.

The Asian subcontinent has not received the strategic consideration that other world areas have, despite the fact that the United States has provided great amounts of economic and military aid to countries in that area. As part and parcel of this policy of aid, the United States has looked to Great Britain as the free world guarantor in the region east of Suez. This was only natural because of the longstanding interest and presence Britain had maintained in the Indian Ocean region.

It can be argued that the United States has no definite military strategy at this time for the Indian Ocean region; likewise, it is clear that a NATO-type arrangement is not suitable here. The U.S. Strike Command at MacDill,

Florida, is responsible for that portion of the Indian Ocean land from India to the westward. The Pacific Command is responsible for that portion eastward from Burma. Although there is a token U.S. naval presence in the Indian Ocean, two destroyers and a flagship, this force is insignificant insofar as its ability to respond to crises requiring military force is concerned. This symbolic force does contribute to maintaining U.S. influence by its presence, and it can provide command and control for forces sent in augmentation. Except for forces currently engaged in Southeast Asia, there are no other U.S. military forces capable of projecting power, either as a show of force or an emergency force, within a reasonable distance of the region.

As previously stated, there are varying alternative military strategies which could be undertaken in an attempt to underwrite American interests and objectives in the Indian Ocean. However, before considering the alternatives, it might be significant to note some of the forces operating to the disadvantage of the United States.

In considering a military strategy for the region, it is important to understand that the bordering states prize their independence and are not averse to taking foreign policy positions at variance with the West. Nearly all of the nations involved were at one time European colonies. Most of them have gained their independence since World War II. Memories of colonial rule have resulted in their adoption of a policy of nonalignment. Some took their lead from India and have refrained from bloc alignment or military alliance with any of the major powers. Others, such as Pakistan and Indonesia, have sided with one major power or another according to their perceptions of their own interests.

Another consideration presented by these states is the power vacuum debate. In their view there is no power vacuum. It is a myth, something created by major powers to deny access to other powers. The nonaligned states believe that the appearance of nonindigenous powers, and most particularly the two superpowers, in an area complicates regional problems. They insist that so-called vacuums must be filled from within through the process of local national development.

Aside from the large number of nonaligned states, there are three participants in SEATO and two members of CENTO. A serious difficulty arises in these troubled partnerships from the fact that Pakistan, a member of both organizations, has widely divergent interests from those of the United States concerning the security of South Asia. Pakistan also regards India as a major adversary; there are serious disputes between the two on territorial matters, resulting in Pakistan even seeking support from the Chinese Peoples Republic.

Australia, who views the threat posed by Russia and China in the same light as the United States, is most concerned for her national security. She also has a vital concern for the potential threat that a heavily populated, nonaligned Indonesia presents. In his book, *U.S. Policy and the Security of Asia,* Fred Greene sees the likelihood that additional demands will be placed on the United States to provide guarantees against any future Communist threat from Indonesia in return for continued and increased Australian support.

Lastly, with regard to problems of commitments in terms of bases or multilateral forces, it appears unlikely that any SEATO member will believe it can afford the burden of additional commitments along the East Coast of Africa, or vice versa. On a recent trip to Malaya, Australia, and New Zealand, Prime Minister Indira Ghandi expressed willingness to enter into economic and social cooperation with members of the Commonwealth, but completely discouraged any possibilities of entering

into defense organizations, even if they could be kept separate from any cold war involvement.

One military strategy the United States could adopt is that of noninvolvement in the Indian Ocean region. This strategy does not require the commitment of American resources. In a military strategy of this type the United States would play a very low key role, if any role at all. Doing so, the United States would not stir the latent anti-Western feelings and anti-imperialistic attitudes of the countries in the area. The major advantages and disadvantages of this strategy alternative can be summed up as follows:

### I--NONINVOLVEMENT

#### PRO

1. Low key role for United States.
2. Does not evoke anti-West feelings by nations.
3. Conserves scarce U.S. military resources.
4. Avoids binding commitments by United States.
5. Assists in U.S. balance of payments.
6. Does not create "irritant" effect in eyes of nonaligned states.

#### CON

1. Opens area to power play by Communist powers.
2. U.S. inability to respond to crises.
3. Inhibits U.S. intelligence gathering.
4. Limits military options.
5. Limits contact and influence between United States and indigenous military leaders.
6. Does not protect past U.S. governmental and private investments.
7. Does not foster development of potential interests.

A second alternative strategy the United States could pursue is that of fostering a regional collective defense organization composed entirely of Indian Ocean bordering states. Under this concept the United States would not become a member of any of the defense organizations, but would be a silent partner. In a silent partner role it would be incumbent upon the United States to provide maximum support from both an economic and military standpoint. There are many advantages in this concept; but from a regional aspect as pertains to the Indian Ocean region, there are underlying issues that do not give credence or feasibility to the alternative. The salient aspects affecting adoption are:

### II--REGIONAL COLLECTIVE DEFENSE ORGANIZATION

#### PRO

1. Fosters intraregional cooperation.
2. Forces regional states to assume responsibilities.
3. Conserves scarce U.S. military forces.
4. Promotes neutralization.
5. Does not project "imperialism." Keeps U.S. support in a low key role.
6. Provides regional defense and an organization for concurrent economic development.

#### CON

1. Political and ethnic diversity of region.
2. Conflicting interests and objectives of different states.
3. Alliances of this natnre are generally weak.
4. Problem of equality of support.
5. Alliance is of questionable utility if power problem is not same for all.
6. Because of nonalignment, difficult for United States to postulate a definite threat to affected states.
7. From U.S. view, would not inhibit Communist influence and presence.

The third alternative strategy is predicated on aid and limited U.S. military participation and provides the maximum of flexibility. It would permit expanded application to other alternative strategies for the long-range future. The United States would provide both economic and military support, and in both cases adequate technical assistance would be required. Under the Military Assistance Program, small but effective MAAG's would be created to contribute to the development of indigenous forces for defensive purposes according to the desires of the countries involved. This alternative would use the full spectrum of national, political, economic, and

military resources, to attain the specific U.S. objective of regional stability and development. Concurrent with the implementation of this strategic alternative, the necessity to achieve friendly relations and deep bonds of trust with the regional states would be realized. The limited military presence of the United States must be geared to the development of trust and friendship within the Indian Ocean region. As obstacles to our military presence are overcome, the military force could be increased as determined necessary for the protection of the American interests and the threats posed. By reliance on a political and military endeavor, the United States could gradually acquire base privileges in the ocean islands and on the mainland of the littoral states. These privileges are necessary to support any naval force of consequence in the region. The major advantages and disadvantages of this alternative are:

### III--U.S. AID AND LIMITED MILITARY PRESENCE

#### PRO

1. Maximum flexibility for use of all U.S. resources.
2. Provides for acquisition of base rights.
3. Provides an intelligence base.
4. Establishes U.S. military presence in region.
5. Permits capability for nuclear missile subs to operate in "back door" of Russia and China.
6. Develops regional states economically and militarily.
7. Immediate response capability by United States.
8. Permits conduct of training exercises between United States and indigenous forces.

#### CON

1. Increases U.S. global military commitments.
2. Inhibits development of regional acceptance of responsibility by relying on U.S. military force.
3. Aid programs are expensive to United States.
4. Nonaligned states may voice strong objection and consider imperialistic.
5. Increases possibility of confrontation between United States and other powers.

A fourth alternative strategy is a multilateral defense alliance between the United States and the major states in the Indian Ocean region. Presently, the United States is involved in the SEATO agreement which is a rather weak military alliance. The type of alliance needed is a strong one in which member states contribute military forces of adequate size to counter effectively any external threat. There are states in the Indian Ocean region with a military potential, the most significant being India, Australia, Indonesia, and Iran. Recently, Australia, New Zealand, Malaysia, and Singapore concluded an agreement to fill the void resulting from departure of the British from Singapore. Ideally, Indonesia should be included in this arrangement, once her internal economic problems have been corrected. Such an agreement would provide a very effective protective capability in the eastern portion of the Indian Ocean and the Malacca Straits in particular. The western portion of the ocean could be brought under a shield in which the United States would be a major participant. Along with the United States, Iran and Ethiopia are desirable members; but they would require considerable military aid to increase their force posture, especially naval forces which are considered to be of utmost importance. A multilateral alliance binding all these nations into one effective force, although intra-regionally oriented, would go far in countering Soviet or Chinese influence. India would also have to be brought into this alliance thus requiring, as a prerequisite, a reorientation of her foreign policy. Today, the likelihood of this is utopian. Significant advantages and disadvantages of the strategy are:

## IV--MULTILATERAL DEFENSE ORGANIZATION

### PRO

1. Provides an "in-being" force to stimulate mutual interest and solidarity.
2. Protects free world interests and investments in region.
3. Could influence some states in alignment.
4. Provides free world balance of power.
5. Requires minimal U.S. military forces.
6. Requires Soviets to increase their efforts to counter.
7. Requires minimal force contribution by states.
8. Provides entree for bases.
9. A strong force, essentially indigenous to the area, which will markedly increase in effectiveness if and as it works together.

### CON

1. Diversity of nations in area.
2. Need for military aid by United States.
3. Indian policy of nonalignment. Ditto for Indonesia.
4. Pakistan not likely to participate.
5. Current political views toward revival of imperialism.
6. Unexpected changes in political views of a state or states could affect defense organization.

The fifth alternative is at the extreme end of the spectrum from "do nothing." This strategy would require the creation of a U.S. Indian Ocean Fleet. The fleet would be a composite of naval units of sufficient size to counter opposing ground and naval forces. It would include, as a minimum, attack carrier task forces, antisubmarine forces, submarine forces, amphibious forces with embarked Marine troops, patrol and riverine craft, and support ships. The deployment of a U.S. force of this size could not be accomplished within the immediate future because of the need for additional ships and personnel and lack of a suitable base. Most importantly, the force would be disproportionate to the U.S. interest in the region. Present naval force commitments in the Mediterranean and in the Tonkin Gulf plus NATO requirements would not permit the withdrawal of selected forces in order to constitute an Indian Ocean Fleet. Therefore, while the alternative is possibly a desirable strategy to ensure protection of U.S. interests, it is not militarily feasible at this time. Advantages and disadvantages of this alternative include:

## V--U.S. INDIAN OCEAN FLEET

### PRO

1. Provides strong force to counter Communist aggression
2. Provides the most responsive force to regional crises.
3. Permits deployment of U.S. nuclear deterrent.
4. Provides U.S. umbrella and allows regional states to pursue internal development.
5. Maximum protection of U.S. interests.
6. Maximizes military options in region.
7. Provides an incentive for revitalization of U.S. shipbuilding.

### CON

1. High visibility presence of United States may irritate other states.
2. Adversely affects balance of payments.
3. Regional states may rely too heavily on U.S. force.
4. Will probably require some reorientation of CENTO and SEATO.
5. Reduces U.S. naval flexibility by imposing another fixed commitment.
6. Expensive in terms of men, money, and materiel.
7. Lack of a naval base in the region. (Development of Diego Garcia beyond its contemplated aviation capability may satisfy this need at some expense.)
8. Justification to Congress and U.S. public would be difficult.

**Conclusions and Recommendations.** The United States does have interests in the Indian Ocean region. Mainly these are secondary level interests not vital to the American national security. There is an indirect relationship, however, since any domination of the region by a power or powers hostile to the United States or the free world might ultimately threaten the security of the United States. The American interests are orderly development of the region in peace and harmony, access to the area,

Naval War College Review, Vol. 22 [1969], No. 6, Art. 19

and the availability of the resources for the overall benefit of mankind and especially for the nations and peoples of the region.

There are indications of a threat to the region. The Soviets have desired access to it for many years. Now, for the first time in their history, they have the capability through maritime strength to project their influence. Because of the fundamental political and economic problems facing the states in this region, their vulnerability to more revolutionary penetration is greater than normal. All of the states and their populations desire rapid progress as a sign of their independence. They are not satisfied with the evolutionary processes. Thus, promises of rapid change meet with greater acceptability. The Soviets and the Communist Chinese have specially oriented their approach to the "Third World" states in a political and economic fashion to encourage precisely such unrest. Recent naval excursions into the region enhance Soviet influence and use the military arm as an extension of political subterfuge.

Significant, however, to the entire Soviet effort is the fact that it has been totally accomplished, to date, within the accepted limits of the law of nations. By consequence, whatever "response" may be considered, it must also fall within these limits. The Russians, in fact, are doing nothing for which they have not a very good precedent in the past history of the West--the only difference being that the world as a whole has progressed toward a higher ideal since that time, and the leaders of the modern movement toward freedom and self-determination are those same one-time colonial powers of the West. It is fundamental to the dilemma of the West and the free world that a variation of Gresham's famous law must operate among nations: that high ideals are driven out of circulation by low ideals. The West, which would like to believe there were no problems, must recognize that the nations of the Western World must select from among the available choices that course of action which not only lies closest to their developed ideals but also gives promise of addressing the problem in the most effective way, within the constraints of the practicable limits of national power. (End of Committee Report)

## ADDENDUM

The foregoing report was presented to students of the School of Naval Warfare on 26 March 1969. During the critique following, several points were raised from the floor:

1. It was noted that the report does not consider South Africa as a potential contributor to any strategic alternative developed by the committee; and this nation was, indeed, hardly mentioned. An examination of the internal and international political situation of South Africa offers a logical explanation for this omission. Although strategically located at one end of the Indian Ocean, covering one of the main trade routes and constituting highly useful ports of call midway on that route, it is highly unlikely that South Africa will be able to exert a favorable influence on any of the countries in the Indian Ocean area for the foreseeable future, or that she would wish to involve herself. Ultimately, it can be hoped, this situation may be resolved to the advantage of the area.

2. Another member from the floor questioned the committee's assumption that there, in fact, exists a "power vacuum" in the Indian Ocean area. He contended that neither of the superpowers had any major military capability in the area and was convinced that any effort by either the United States or the Soviet Union to establish themselves would be met by strong resentment of the nations concerned and, thus, would be counterproductive. As an extension

of this theme, another member questioned the concern for a limited Soviet naval capability in the area of the Persian Gulf, especially in the case of Iran in view of its extensive common border with the Soviets. He suggested that the power vacuum, like beauty, rests in the eyes of the beholder. If the nations on the Indian Ocean littoral were not overly concerned, why should the United States be?

3. Another participant from the floor asked the committee if it had taken the mood of the U.S. Congress and the people into consideration in developing its several strategies. He believed that neither Congress nor the American people would look favorably upon a new commitment of any significance unless a *real* vital interest was at stake.

4. A final point was raised from the floor concerning an alternative of broader scope than those presented in the report. The basic purpose of the committee had been to examine alternative military strategies for the United States in the Indian Ocean region. Although it is true that alternative III considers economic factors, attention was naturally focused primarily on the military policy aspect rather than on the political or economic possibilities.

The identified strategic alternatives, however, offer a point of departure for developing a broader U.S. overall strategy which integrates the politico-economic-military resources available not only to the United States, but also to other interested free world nations and to Indian Ocean powers. It would be designed on a multinational rather than a unilateral approach. It would portray the United States as a partner with other nations on a cost-sharing basis. It would therefore have the appeal of being more acceptable on a national basis at home as well as being more politically acceptable from an international viewpoint overseas.

The basis for this strategy would be the formation of an Indian Ocean Area Military and Economic Aid Consortium (IOMEC). Under this concept the United States, as a member of the consortium, would give low-visibility support to responsible economic and military assistance to countries of the area designed to help in their development and support the peace and stability of the area. Such nonindigenous nations as West Germany, Japan, Canada, and the Netherlands might be partners in such a consortium.

The IOMEC concept is political, economic, and military in thrust. It is recognized today that the Soviets and Communist China are carrying out a substantial military and economic aid program, offering it to not only India and Pakistan but to Iraq, Iran, South Yemen, Ethiopia, Sudan, Somalia, Kenya, Tanzania, Ceylon, Mauritius, and other nations of the area. This concept of IOMEC would give Indian Ocean states an option to receive free world aid and assistance, rather than aid from Russia and Communist China, and thus avoid the attendant "strings" which the Communists invariably attach.

To complement the free world aid option described, the concept also calls for the establishment of a free world naval force in the Indian Ocean--as a counter to the burgeoning Soviet naval presence in the area. This would be a multinational force. In the first phase it conceivably might be initiated by the establishment of a United States-Australian-New Zealand--an ANZUS--force. In the second phase, recognizing that the primary goal/objective is peace and stability of the entire area, participation in the force would be open ended. Any country of the area, with forces available, would be welcome to participate. The force would operate more in the spirit of article 52 of the United Nations Charter--a regional peacekeeping force--rather than in support of any military treaty organization. Of indigenous nations in the area--Ethiopia and Iran, as

well as India and Pakistan, have some naval forces which might support their participation. Conceivably the United Kingdom and the Netherlands, with their major economic interests in the area, might participate in this peace-keeping force.

Advantages and disadvantages of the IOMEC strategy might be summarized as follows:

### PRO

1. Provides free world counter to overall Soviet/CHICOM challenge to gain dominance in area.
2. Helps develop regional states economically and militarily, under free world vice Soviet/CHICOM influence.
3. Provides a free world "in-being" naval force to assist in maintaining peace and stability of the area; provides uncommitted nations with an option free from Soviet "strings."
4. Helps protect free world interests and investments in the area.
5. Requires modest U.S. military forces.
6. Permits cooperative training of Western free world and indigenous military forces.
7. Cost-sharing basis allows achievement of goals with minimum U.S. economic expenditure.
8. Requires only modest force contribution by individual states.
9. Partnership approach would probably be most palatable to Congress and U.S. public.
10. Free world multinational approach (with U.S. participation) would be better received in Indian Ocean area than a unilateral U.S. approach.

### CON

1. Diversity of interests and objectives of nations involved would present problems in implementation.
2. Possibility that regional states would view United States/European free world participation as revival of colonialism.
3. Limitations on U.S. influence over conduct of affairs due to large number of participating states.
4. United States would have to share in command and control of Indian Ocean multinational naval force.


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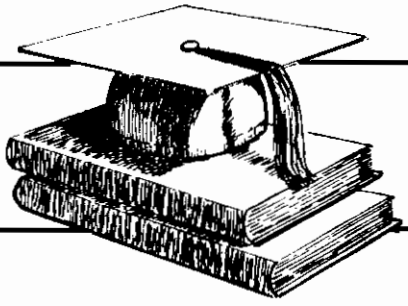

# PROFESSIONAL READING

The evaluations of recent books listed in this section have been prepared for the use of resident students. Officers in the fleet and elsewhere may find these books of interest in their professional reading.

The inclusion of a book in this section does not necessarily constitute an endorsement by the Naval War College of the facts, opinions or concepts contained therein.

Many of these publications may be found in ship and station libraries. Certain of the books on the list which are not available from these sources may be available from one of the Navy's Auxiliary Library Service Collections. These collections of books are obtainable on loan. Requests from individual officers to borrow books from an Auxiliary Library Service Collection should be addressed to the nearest of the following special loan collections.

Chief of Naval Personnel (C-463)
Department of the Navy
Washington, D.C. 20370

Commanding Officer
U.S. Naval Station (Guam)
Library (ALSC), Box 174
San Francisco, Calif. 96630

Commanding Officer
U.S. Naval Station
Library (ALSC), Bldg. C-9
Norfolk, Virginia 23511

Commanding Officer
U.S. Naval Station (Pearl Harbor)
Library (ALSC), Box 20
San Francisco, Calif. 96610

Commanding Officer
U.S. Naval Station
Library (ALSC)
San Diego, Calif. 92136

Baker, Leonard. *The Guaranteed Society*. New York: Macmillan, 1968. 276p.

Mr. Leonard Baker, the author of *The Guaranteed Society*, is deeply concerned over a new philosophy being evinced by the Federal Government. He contends that since 1963, with the initial development of the supersonic transport, the Federal Government has undertaken a policy of guaranteeing private industry a ripe return on its enterprises with a minimal risk of its assets, i.e., utilizing Federal funds in areas normally reserved for private investment, but allowing private industry to reap the dividends from these efforts. In essence, instead of being the land of opportunity for all, Mr. Baker foresees America as the land of certainty for the few. To support this thesis the author cites, in addition to the development of the SST, such areas as the Federal subsidization, the U.S. merchant marine, the development of the oil shale industry, and the granting of patent rights on inventions developed with the aid of Federal funds. He goes one step further with a lengthy dissertation on the proposed guaranteed annual income legislation. The author makes a good case for his "guaranteed society" theory. Occasionally he will tend to harp on certain points to an extreme, at which time he becomes less than objective; nevertheless, he has chosen some interesting cases to support his claim. The book is all the more interesting since these cases are, by themselves,

controversial. Whether one agrees with Mr. Baker's contention or not, the book is well worth reading, particularly for those who are interested in trends in Government domestic financial policies.

C.H. NORDHILL
Commander, U.S. Navy

Falk, Richard A., ed. *The Vietnam War and International Law.* Princeton: Princeton University Press, 1968. 633p.

This volume of readings and documents, prepared under the auspices of the Civil War Panel of the American Society of International Law and edited by the panel's Chairman, Professor Richard Falk of Princeton University, contains an excellent sampling of the nonpolemical writings of U.S. international lawyers who are either critics or defenders of the legality of American participation in the Vietnam war. In the year since its publication, this collection already has become the leading reference work for persons interested in the short- and long-range legal aspects of the conflict in Indochina.

The book is divided into four sections. Part I, which contains eight selections ranging from those by Emmerich de Vattel and John Stuart Mill to those by Roger Fisher and Wolfgang Friedmann, offers the reader a broad view of the legal issues involved, but in a setting largely independent of the Vietnam war. Part II consists of seven selections developing the opposing interpretations of fact and law that touch upon whether, and in what respects, the U.S. involvement in Vietnam is lawful or not. The principal contributor to this section, with two lengthy articles, is John Norton Moore, the most articulate and convincing exponent of the legitimacy of U.S. participation. In part III, eight selections continue the focus upon Vietnam, but they enlarge the perspective of concern to present assessments of the world order consequences ensuing from the various stages of U.S. involvement. Here the volume's editor, the leading critic of American involvement in Vietnam, permits himself 2 days in court. Finally, part IV represents a more useful compilation of documentary sources, including the Geneva Accords, the Gulf of Tonkin Resolution, and the Legal Adviser's Memorandum of Law on "The Legality of United States Participation in the Defense of Vietnam." In sum, this book should be in every library for use by anyone interested in the most important foreign policy and international law issue to confront the United States during this decade. It is to be followed shortly by a second volume of readings which should be just as valuable.

R.B. LILLICH
Charles H. Stockton Chair of International Law

Reynolds, Clark G. *The Fast Carriers: the Forging of an Air Navy.* New York: McGraw-Hill, 1968. 498p.

There are many historians and some professional naval officers who assume that Samuel Eliot Morison has written almost all that can be said about the naval side of World War II. Most of the historians and naval "buffs" are not really competent to judge whether his conclusions are completely sound or, more importantly, if he might not have lost track of why the Pacific war was won. Professor Clark Reynolds, of the University of Maine and earlier the U.S. Naval Academy, is a professional historian who believes that Morison might have missed the point. He suspects that this occurred because the Harvard historian spent his time at sea during the war among the "black shoe Navy" types and did not get to know the naval aviators ("the brown shoes") who fought their own war in ships quite different from the cruisers *Baltimore* and *Brooklyn* or the battleships *Tennessee* and *Washington.*

Reynolds highlights his own conclusion thusly:

General Tojo told General MacArthur after the war that the three major factors in the defeat of Japan were the far-ranging operations of the Fast Carrier Task Force, the leapfrogging and neutralization of major bases (made possible by the fast carriers), and the destruction of Japan's merchant shipping by American submarines.

Reflecting the views of the carrier admirals, the author is not convinced that MacArthur's campaigns in the Admiralties, Bismareks, New Guinea, and the Philippines were strategically sound or necessary once the Japanese were stopped in the Solomons. Admiral Nimitz' drive to the Marianas was needed for advanced naval bases and long-range bomber fields, but from there a strategy of blockade and interdiction of supply lines (by submarine and carrier forces) and bombardment from the Marianas might well have finished Japan. Had this strategy been pursued, the war might have been shortened--and Morison's series as well.

While most of the naval and amphibious actions of the Pacific war are chronicled, Reynolds focuses constantly on the fast carrier groups and their admirals. His heroes are Admirals M.A. Mitscher, J.H. Towers, Frederick C. Sherman, and J.J. Clark. Chester Nimitz is admitted to this pantheon because he finally recognized the value of the fast carrier forces and allowed the air admirals proper representation within his councils. Morison's hero, Admiral Raymond A. Spruance, is downgraded seriously because he did not understand carrier warfare, risked the fast carriers unwisely at times, and lost opportunities for even greater victories because he was a naval "formalist" who insisted on maintaining the integrity of the old battleline and its battleships. Admirals W.F. Halsey and J.S. McCain are looked on as bumbling strategists and tacticians who survived because of charismatic leadership qualities and more materiel than the Japanese could sink. Reynolds' judgments, often quite blunt, undoubtedly reflect the several dozen interviews he had with the air admirals and his research in their manuscripts and diaries. To some, Reynolds will seem a bit "flip" or irreverent because of the familiarity with which he refers to the admirals. They become "Ted" (F.C.) Sherman, "Baldy" (C.A.) Pownall, or "Jocko" (J.J.) Clark. But they were known to one another by these sobriquets, and they were recognized in the fleet by such names. At times I did have trouble separating "Ted" Sherman from Forrest Sherman or "Ziggy" (C.A.F.) Sprague from T.L. Sprague, but normally the nicknames helped to identify the characters.

The author departs most strikingly from the conclusions of Morison when he deals with Admiral Raymond A. Spruance, Commander of the 5th Fleet. Looking back to the admiral's prewar years at the Naval War College, Reynolds concludes that his training and teaching there had made him a naval "formalist." He never doubted that the Japanese main fleet would eventually be brought to bay and destroyed in a Jutland-type gun battle. Because of this premise, Spruance always operated carriers and battleships together with the doctrine that called for deploying the battleline with carriers on tap to protect it. This was done in the Gilberts, Marianas, and Leyte Gulf campaigns. From the viewpoint of Vice Admiral Mitscher or Rear Admiral F.C. Sherman, whom Reynolds classified as naval "meleeists" in contrast to "formalists" (both terms describe British sailing Navy tactical schools), such doctrine was totally wrong; for it hampered the mobility and striking power of the carriers. Most seriously, it defeated the opportunity for the carriers to destroy the Japanese Fleet in the Battle of the Philippine Sea.

Because he is concerned with fast carrier warfare, Reynolds also gives plenty of space to British and Japanese naval aviation and carriers. What he

demonstrates is that warfare from carriers took a continuing supply of well-trained aviators and that the Japanese squandered this precious resouree on too many wrong occasions. The inevitable supremaey of the U.S. Navy, made manifest in the Battle of the Philippine Sea (19-21 June 1944), was demonstrated in the hattle off Cape Engano (25-26 Oetoher 1944). Here the Japanese sent four empty carriers and two hermaphrodite battleship-carriers against a potential 1,000 U.S. Navy planes. The history and development of fast carrier aviation in the British Navy is told in several chapters. As in the ease of the Japanese story, he uses a judieious mixture or interviews, memoirs, and secondary works to establish his points.

Finally, Reynolds reeognized that allocation of resources and development of taetieal doetrine are the works of naval leadership. In several chapters he moves inside Adm. E.J. King's headquarters at Main Navy or into Adm. C.W. Nimitz' staffs at Pearl Harbor and Guam. He deseribes the infighting that was neeessary to get air admirals assigned to high levels of authority and responsibility. Here Admirals John Towers, Forrest Sherman, and Arthur Radford are given proper reeognition for insisting that aviator adviee was absolutely neeessary in the staffs, ashore or afloat, when they began planning operations that would involve the use of earriers. More importantly, as Reynolds demonstrates, their adviee was meaningful when followed. It is quite evident that the importanee of naval aviators in the top leadership positions today is traceable to a few "chargers" of the 1942-45 years.

The depth of researeh and variety of interesting materials used in this book are admirably described in a long bibliographical essay. MeGraw-Hill is to be congratulated for investing 81 pages in bibliography, appendiees, ehapter notes, and a first-elass index. The photos are ample and well selected. Overall, Professor Reynolds deserves a snapping "well-done" from the Nohle and Aneient Order of Tail-hookers.

GERALD E. WHEELER
Ernest J. King Chair of
Maritime History

Treml, Vladimir G., ed. *The Development of the Soviet Economy.* New York: Praeger, 1968. 296p.

This report hy 12 speeialists on the Soviet economy is the outgrowth of the papers presented at a conferenee in Munieh in Octoher of 1966 on "The Oetober Revolution: Promise and Realization" under the auspiees of the Institute for the Study of the U.S.S.R. The 12 authors are fairly representative of Western seholarship on Soviet affairs and eome from Franee, Germany, the United Kingdom, and the United States, each being a reeognized authority on a partieular aspeet of the Soviet eeonomy. Every paper was suhjeet to critieism by other experts and profited hy this procedure. The studies differ in seope and format, ranging from poliey alternatives and the dynamies of eeonomie growth to speeifie seetor analysis. They aehieve their aim of a eomprehensive 50-year survey of the Soviet eeonomy. A seleet few are hriefly summarized below.

Stanley H. Cohn's paper on the performance and growth of the Soviet economy marshals all the best of the evidence on the question from many sourees. Comparisons indicate tbat growth has occurred, hut not enough to justify adoption of the Soviet system by other eountries. This, as other papers also show, is particularly true of agricultural productivity whieh in most eeonomies has outstripped total productivity increases. Eugene Zaleski's paper on Soviet planning distingnishes hetween types of planning, showing that the Soviets have had largely administrative planning, hut with variations. The eonclusion of the author is that the economie poliey with regard to armaments, inflation, agrieulture, and the propor-

tion of resources allocated to investment and consumption is more important than the planning system. Norton T. Dodge in his paper on Soviet labor concludes that the workers are better off today, but that the use of forced labor was significant and played a large role in certain industries and areas in providing economic development. One estimate made the number of persons in labor camps as high as 13,500,000 in 1941, and an estimate that today the number was only 30 percent of the numbers under Stalin shows the continued significance of forced labor to the Soviet economy. Leon M. Herman, discussing foreign trade, suggests that the Soviet leaders have found it is uneconomical to let ideology determine trade and that the benefits of trade are not to be overlooked. This is particularly true if the Soviets are to get the best of machines for their production lines. G. Warren Nutter's paper concludes the series with the comment that "If my figures are substantially correct, the performance of Soviet industry over the last half century, while impressive, is neither unusual nor unprecedented."

This book could well be included in professional reading lists as a basic treatment on the Soviet economy.

P.L. GAMBLE
Chair of Economics

The pathway of man's journey through the ages is littered with the wreckage of nations, which, in their hour of glory, forgot their dependence on the sea.

*Brigadier General J.D. Hittle, USMC:*
*Speech in Philadelphia 28 October 1961*

# CUMULATIVE INDEX
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Wheeler, Gerald E. "National Policy Planning between the World Wars: Conflict between Ends and Means." February 1969.

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Wheeler, Gerald E. "William Veazie Pratt, U.S. Navy: a Silhouette of an Admiral." May 1969.

Ψ

Victory is the beautiful, bright-colored flower. Transport is the stem without which it could never have blossomed.

*Winston Churchill: The River War, viii, 1899*

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